Academic Calendars

2011 – 2012

Fall Quarter 2011
Quarter begins . . . . . . . . . . . . . . . . . . . . . . . . September 19
Instruction begins . . . . . . . . . . . . . . . . . . . . September 22
Veterans Day holiday . . . . . . . . . . . . . . . . . . November 11
Thanksgiving holiday . . . . . . . . . . . . . . . . . . November 24–25
Instruction ends . . . . . . . . . . . . . . . . . . . . . . . . December 2
Common final examinations. . . . . . . . . . . . . . . . . December 3–4
Final examinations . . . . . . . . . . . . . . . . . . . . . . . December 5–9
Quarter ends . . . . . . . . . . . . . . . . . . . . . . . . . December 9
Christmas holiday . . . . . . . . . . . . . . . . . . . December 26–27
New Year’s holiday . . . . . . . . . . . . . . . . . . . December 30–January 2

Winter Quarter 2012
Quarter begins . . . . . . . . . . . . . . . . . . . . . . . . . . January 4
Instruction begins . . . . . . . . . . . . . . . . . . . . . . . January 9
Martin Luther King, Jr. holiday . . . . . . . . . . . January 16
Presidents’ Day holiday . . . . . . . . . . . . . . . . . February 20
Instruction ends . . . . . . . . . . . . . . . . . . . . . . . . . March 16
Common final examinations. . . . . . . . . . . . . . . March 17–18
Final examinations . . . . . . . . . . . . . . . . . . . . . . . March 19–23
Quarter ends . . . . . . . . . . . . . . . . . . . . . . . . . . . March 23

Spring Quarter 2012
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 2012
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 Quarter 2013
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 2013
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
The UCLA General Catalog is available at http://www.registrar.ucla.edu/catalog/. Links to updates of UCLA courses and curricula are available from the online Catalog main menu.
Consult the online Schedule of Classes for detailed information on registration and enrollment and for academic and administrative deadlines. The online Schedule at http://www.registrar.ucla.edu/schedule/ has the most current information about fees, deadlines, and courses.

http://www.registrar.ucla.edu
FROM THE CHANCELLOR OF UCLA

The UCLA General Catalog for 2011-2012 presents the wealth of academic opportunities available at one of the world’s premier universities.

A leader in education, research, and service, UCLA represents the very best of what a university can be. Our extraordinary students come from an incredibly diverse range of backgrounds; our faculty are committed to excellence in scholarship and teaching; and many of our academic programs are ranked among the world’s best.

As a research university committed to creating and disseminating knowledge across the disciplines, we are especially proud of the richness and breadth of our teaching program which comprises 195 majors and more than 14,000 courses in the UCLA College of Letters and Science and 11 professional schools.

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 offer small classes in a broad array of subjects; Freshman Clusters, which engage students in yearlong, team-taught interdisciplinary examinations of an array of timely topics; and advanced research opportunities.

Our campus is home to a vibrant academic community of faculty and student scholars who advance knowledge, pursue intellectual achievement, collaborate across disciplines, and address social challenges through engagement with the community.

I encourage you to explore UCLA beyond this catalog. Please visit us on campus or online at http://www.ucla.edu.

Gene D. Block
Chancellor
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UCLA Majors and Degrees

COLLEGE OF LETTERS AND SCIENCE

African Studies Interdepartmental Program
African Studies ........................ M.A.

Afro-American Studies Interdepartmental Program
Afro-American Studies ............... B.A., M.A.

American Indian Studies Interdepartmental Program
American Indian Studies .......... B.A., M.A.

Anthropology Department
Anthropology ........................ B.A., B.S., M.A., Ph.D.

Applied Linguistics Department
African Languages ......................... B.A.
Applied Linguistics ......................... B.A., M.A., C.Phil., Ph.D.
Teaching English as a Second Language . M.A.

Archaeology Interdepartmental Program
Archaeology ............................ M.A., C.Phil., Ph.D.

Art History Department
Art History ............................ B.A., M.A., Ph.D.

Asian American Studies Interdepartmental Program

Asian American Studies ........................ B.A., M.A.

Asian Languages and Cultures Department
Asian Humanities ........................ B.A.
Asian Languages and Cultures ............. M.A., C.Phil., Ph.D.
Asian Religions ............................. B.A.
Chinese ..................................... B.A.
Japanese .................................... B.A.
Korean ...................................... B.A.

Atmospheric and Oceanic Sciences

Atmospheric, Oceanic, and Environmental Sciences .................... B.S.
Atmospheric and Oceanic Sciences ........................................ B.S., M.S., C.Phil., Ph.D.

Bioinformatics Interdepartmental Program
Bioinformatics ............................ M.S., Ph.D.

Chemistry and Biochemistry Department
Biochemistry ............................... B.S.
Biochemistry and Molecular Biology .............................. M.S., C.Phil., Ph.D.
Chemistry ................................. B.S., M.S., C.Phil., Ph.D.

Chemistry/Materials Science Interdepartmental Program
Chemistry/Materials Science ................. B.S.

Chicana and Chicano Studies Department
César Chávez Studies ....................... B.A., M.A., Ph.D.
Chicana and Chicano Studies .......................... B.A., M.A., C.Phil., Ph.D.

Classics Department
Classics ..................................... M.A., C.Phil., Ph.D.
Classical Civilization ....................... B.A.
Greek ....................................... B.A., M.A.
Greek and Latin ............................. B.A.
Latin ........................................ B.A., M.A.

Communication Studies Department
Communication Studies ...................... B.A.

Comparative Literature Department
Comparative Literature ..................... B.A., M.A., C.Phil., Ph.D.

Computational and Systems Biology Interdepartmental Program
Computational and Systems Biology .......... B.S.

Conservation of Archaeological and Ethnographic Materials Interdepartmental Program
Conservation of Archaeological and Ethnographic Materials ................. M.A.

Earth and Space Sciences
Earth and Environmental Science ............ B.A.
Geochemistry ............................. M.S., C.Phil., Ph.D.
Geology ................................. B.S., M.S., C.Phil., Ph.D.
Geology/Engineering Geology ................ B.S.
Geology/Paleobiology ........................ B.S.
Geophysics/Applied Geophysics .............. B.S.
Geophysics/Geophysics and Space Physics . B.S.
Geophysics and Space Physics ........................ M.S., Ph.D.

East Asian Studies Interdepartmental Program
East Asian Studies ......................... B.A., M.A.

Ecology and Evolutionary Biology Department
Ecology, Behavior, and Evolution ............... B.S.
Marine Biology ............................ B.S.

Economics Department
Business Economics ........................ B.A.
Economics ................................. B.A., M.A., C.Phil., Ph.D.
Economics/International Area Studies ...... B.A.

English Department
American Literature and Culture .............. B.A.
English ................................. B.A., M.A., C.Phil., Ph.D.

European Studies Interdepartmental Program
European Studies ........................ B.A.

French and Francophone Studies Department
French ........................................ B.A.
French and Francophone Studies ............. M.A., C.Phil., Ph.D.
French and Linguistics ........................ B.A.

Geography Department
Geography ................................. B.A., M.A., C.Phil., Ph.D.
Geography/Environmental Studies .......... B.A.

Germanic Languages Department
German ...................................... B.A.
Germanic Languages ........................ M.A., C.Phil., Ph.D.
Scandinavian ................................ M.A.
Scandinavian Languages and Cultures ...... B.A.

Global Studies Interdepartmental Program
Global Studies ............................. B.A.

History Department
History ................................. B.A., M.A., C.Phil., Ph.D.
History/Art History Interdepartmental Program
History/Art History ........................ B.A.
Individual Field of Concentration
Individual Field of Concentration ............ B.A.

Indo-European Studies Interdepartmental Program
Indo-European Studies ..................... C.Phil., Ph.D.
Institute of the Environment and Sustainability Center for Interdisciplinary Instruction
Environmental Science ........................ B.S.

Integrative Biology and Physiology Department
Physiological Science ........................ B.S., M.S.

International Development Studies
International Development Studies .......... B.A.

Islamic Studies Interdepartmental Program
Islamic Studies ........................... M.A., C.Phil., Ph.D.

Italian Department
Italian ...................................... B.A., M.A., C.Phil., Ph.D.
Italian and Special Fields ..................... B.A.

Latin American Studies Interdepartmental Program
Latin American Studies ...................... B.A., M.A.

Linguistics Department
Linguistics ................................. B.A., M.A., C.Phil., Ph.D.
Linguistics and Anthropology ............... C.Phil.
Linguistics and Asian Languages and Cultures ........................ B.A.
Linguistics and Computer Science .............. B.A.
Linguistics and English ........................ B.A.
Linguistics and French ........................ B.A.
Linguistics and Italian ........................ B.A.
Linguistics and Philosophy ........................ B.A.
Linguistics and Psychology ........................ B.A.
Linguistics and Scandinavian Languages ........................ B.A.

Mathematics Department
Applied Mathematics ........................ B.S.
Mathematics ............................... B.S., M.A., M.A.T., C.Phil., Ph.D.
Mathematics/Physics ........................ B.S.
Mathematics for Teaching ........................ B.S.
Mathematics of Computation ........................ B.S.

Mathematics/Economics Interdepartmental Program
Mathematics/Economics .................... B.S.

Microbiology, Immunology, and Molecular Genetics Department
Microbiology, Immunology, and Molecular Genetics ........................ B.S., M.S., Ph.D.

Middle Eastern and North African Studies Interdepartmental Program
Middle Eastern and North African Studies ....................... B.A.

Molecular Biology Interdepartmental Program
Molecular Biology ........................... Ph.D.

Molecular, Cell, and Developmental Biology Department
Molecular, Cell, and Developmental Biology .............. B.S., M.A., C.Phil., Ph.D.

Molecular, Cellular, and Integrative Physiology Interdepartmental Program
Molecular, Cellular, and Integrative Physiology ........................ Ph.D.

Musicology Department
Music History ............................. B.A.
Musicology ............................... M.A., C.Phil., Ph.D.

Near Eastern Languages and Cultures Department
Ancient Near Eastern Civilizations .......... B.A.
Arabic ....................................... B.A.
Hebrew ...................................... B.A.
Iranian Studies .............................. B.A.
Jewish Studies .............................. B.A.
Near Eastern Languages and Cultures .......... B.A.

Neuroscience Interdepartmental Program
Neuroscience ............................... B.S.

Philosophy Department
Philosophy ................................. B.A., M.A., C.Phil., Ph.D.

Physics and Astronomy Department
Astronomy ................................. M.S., M.A.T., Ph.D.
Astrophysics ............................... B.S.
Biophysics ................................. B.S.

Geography

Geography ................................. B.A., M.A., C.Phil., Ph.D.

Global Studies

Geography/Environmental Studies .......... B.A.

History

History ................................. B.A., M.A., C.Phil., Ph.D.

History/Art History Interdepartmental Program
History/Art History ........................ B.A.

Individual Field of Concentration
Individual Field of Concentration ............ B.A.

Indo-European Studies

Indo-European Studies ..................... C.Phil., Ph.D.

Institute of the Environment and Sustainability Center for Interdisciplinary Instruction
Environmental Science ........................ B.S.

Integrative Biology and Physiology

Physiological Science ........................ B.S., M.S.

International Development Studies

International Development Studies .......... B.A.

Islamic Studies

Islamic Studies ........................... M.A., C.Phil., Ph.D.

Italian Department

Italian ...................................... B.A., M.A., C.Phil., Ph.D.

Italian and Special Fields ..................... B.A.
GRADUATE SCHOOL OF EDUCATION AND INFORMATION STUDIES

Education Department
Education . . . . . . . M.A., M.Ed., Ed.D., Ph.D.
Educational Administration . . Joint Ed.D. with UCI
Special Education . Join Ph.D. with CSULA

Information Studies Department
Information Studies . . . . . . Ph.D.
Library and Information Science . . . . . . . M.L.I.S.

Moving Image Archive Studies
Interdepartmental Program
Moving Image Archive Studies . . . . . . M.A.

HENRY SAMUELI SCHOOL OF ENGINEERING AND APPLIED SCIENCE

Bioengineering Department . . . . . . B.S.
Biomedical Engineering Interdepartmental Program
Biomedical Engineering . . . . . . M.S., Ph.D.
Chemical and Biomolecular Engineering Department
Chemical Engineering . . . . . . B.S., M.S., Ph.D.
Civil and Environmental Engineering Department
Civil Engineering . . . . . . B.S., M.S., Ph.D.

Computer Science Department
Computer Science . . . . . . B.S., M.S., Ph.D.
Computer Science and Engineering . . . . B.S.

Electrical Engineering Department
Electrical Engineering . . . . . . B.S., M.S., Ph.D.
Engineering Schoolwide Programs
Engineering . . . . . . M.Eng., M.S., Engr.

Materials Science and Engineering Materials Engineering . . . . . . B.S.
Materials Science and Engineering . . . . M.S., Ph.D.

Mechanical and Aerospace Engineering Department
Aerospace Engineering . . . . . . B.S., M.S., Ph.D.
Manufacturing Engineering . . . . . . M.S.
Mechanical Engineering . . . . . . B.S., M.S., Ph.D.

JOHN E. ANDERSON GRADUATE SCHOOL OF MANAGEMENT

Management Department
Management . . . . . . M.B.A., M.F.E., M.S., Ph.D.

MEYER AND RENEE LUSKIN SCHOOL OF PUBLIC AFFAIRS

Public Policy Department
Public Policy . . . . . . M.P.P.

Social Welfare Department
Social Welfare . . . . . . M.S.W., Ph.D.

Urban Planning Department
Urban and Regional Planning . . . . . . M.U.R.P.
Urban Planning . . . . . . Ph.D.

SCHOOL OF THE ARTS AND ARCHITECTURE

Architecture and Urban Design Department
Architectural Studies . . . . . . B.A.
Architecture . . . . . . M.Arch. I, M.Arch. II, M.A., Ph.D.

Art Department
Art . . . . . . . B.A., M.F.A.

SCHOOL OF DENTISTRY

Dentistry Department
Dental Surgery . . . . . . D.D.S

Oral Biology Section
Oral Biology . . . . . . M.D., Ph.D.

SCHOOL OF LAW

Law Department
Law . . . . . . LL.M., J.D., S.J.D.

SCHOOL OF NURSING

Nursing Department
Nursing . . . . . . B.S., M.N.S., Ph.D.

SCHOOL OF PUBLIC HEALTH

Biostatistics Department
Biostatistics . . . . . . M.S., Ph.D.

Community Health Sciences Department
Public Health . . . . . . M.S., Ph.D.

Environmental Health Sciences Department
Environmental Health Sciences . . . . M.S., Ph.D.

Environmental Science and Engineering Department
Environmental Science . . . . . . M.S., Ph.D.

Epidemiology Department
Epidemiology . . . . . . M.S., Ph.D.

Health Services Department
Health Services . . . . . . M.S., Ph.D.

Molecular Toxicology Interdepartmental Program
Molecular Toxicology . . . . . . Ph.D.

Public Health Schoolwide Programs
Preventive Medicine and Public Health . . . . . . M.P.H., Dr.P.H.

SCHOOL OF THEATER, FILM, AND TELEVISION

Film, Television, and Digital Media Department
Film and Television . . . . . . B.A., M.F.A., Ph.D.

Individual Field
Individual Field . . . . . . B.A.

Moving Image Archive Studies
Interdepartmental Program
Moving Image Archive Studies . . . . . . M.A.

Theater Department
Theater . . . . . . B.A., M.A., M.F.A.

Theater and Performance Studies
Theater and Performance Studies . . . . . . C.Phil., Ph.D.
Undergraduate Minors and Specializations

MINORS
College of Letters and Science
- African Studies
- Afro-American Studies
- American Indian Studies
- 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
- Educational Policy
- English
- Environmental Systems and Society
- European Studies
- French
- Geochemistry
- Geography
- Geology
- Geophysics and Planetary Physics
- Geospatial Information Systems and Technologies
- German
- Germanic Languages
- Gerontology
- Global Studies
- Greek
- Hebrew and Jewish Studies
- History of Science and Medicine
- Human Complex Systems
- Italian
- Labor and Workplace Studies
- Language, Interaction, and Culture
- Language Teaching
- Latin
- Latin American Studies
- Lesbian, Gay, Bisexual, and Transgender Studies
- Linguistics
- Mathematics
- Mexican Studies
- Middle Eastern and North African Studies
- Museum Studies
- Music History
- Naval Science
- Near Eastern Languages and Cultures
- Neuroscience
- Philosophy
- Political Science
- Portuguese
- Russian Language
- Russian Literature
- Russian Studies
- Scandinavian
- Social Thought
- Society and Genetics
- South Asian Studies
- Southeast Asian Studies
- Spanish
- Spanish Linguistics
- Statistics
- Women's Studies

Graduate Concurrent and Articulated Degrees

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.

Management M.B.A./Latin American Studies
- Interdepartmental M.A.
- Management M.B.A./Law J.D.
- Management M.B.A./Library and Information Science M.L.I.S.
- Management M.B.A./Medicine M.D.
- Management M.B.A./Nursing M.S.N.
- Management M.B.A./Public Health M.P.H.
- Management M.B.A./Public Policy M.P.P.
- Philosophy Ph.D./Law J.D.
- Public Health M.P.H./Law J.D.
- Public Policy M.P.P./Law J.D.
- Social Welfare M.S.W./Law J.D.
- Social Welfare M.S.W./Public Policy M.P.P.
- Urban Planning M.U.R.P./Law J.D.

ARTICULATED DEGREES
Articulated degree programs permit no credit overlap; students must complete degree requirements separately for each degree.

Graduate School of Education and Information Studies
- Education Studies
- Henry Samueli School of Engineering and Applied Science
- Environmental Engineering
- John E. Anderson Graduate School of Management
- Accounting
- Meyer and Renee Luskin School of Public Affairs
- Urban and Regional Studies
- School of the Arts and Architecture
- Visual and Performing Arts Education
- School of Public Health
- Public Health
- School of Theater, Film, and Television
- Film, Television, and Digital Media
- Theater

SPECIALIZATIONS
College of Letters and Science
- Computer Science
- Chemistry
- Communication Studies
- Ecology and Evolutionary Biology
- Economics
- Geography
- Linguistics
- Mathematics
- Mathematics/Economics
- Molecular, Cell, and Developmental Biology
- Psychology
- Sociology
- International Relations
About UCLA

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

TEACHING

The National Research Council Committee to Assess Research-Doctorate Programs evaluates the quality of the faculty in 212 American research universities, rates UCLA fourteenth in the nation among both public and private universities approximately every 15 years. Of the 62 doctoral degree disciplines studied, 33 UCLA academic departments are ranked among the top 10 in the country and 12 are 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 between one college and 11 professional schools. The College of Letters and Science offers programs leading to both undergraduate and graduate degrees, as do the School of the Arts and Architecture, Henry Samueli School of Engineering and Applied Science, School of Nursing, and School of Theater, Film, and Television. The other professional schools offer graduate programs exclusively: the Graduate School of Education and Information Studies, School of Law, John E. Anderson Graduate School of Management, Luskin School of Public Affairs and, in the health sciences, the School of Dentistry, David Geffen School of Medicine, and School of Public Health.

Undergraduates may earn a Bachelor of Arts or Bachelor of Science degree in one of 128 different disciplines; graduate students may earn one of 88 master’s and 110 doctoral and 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.

SERVICE

As a public university, serving the community is one of UCLA’s greatest commitments. 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.

In terms of overall excellence, UCLA is one of America’s most prestigious and influential public universities. It is consistently rated among the best universities in the nation.
A Brief History of UCLA

With only 11,000 inhabitants in 1880, the pueblo of Los Angeles convinced the state government to establish a State Normal School in Southern California. Enthusiastic citizens contributed between $2 and $500 to purchase a site, and on August 29, 1882, the Los Angeles Branch of the 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 by 1927 the Southern Branch had earned its new name: University of California at Los Angeles. (The name was changed again in 1958 to University of California, Los Angeles.)

Continued growth mandated the selection of 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—formed a lonesome cluster in the middle of 400 empty acres. The campus hosted some 5,500 students its first term in 1929. The Regents established the master’s degree at UCLA in 1933 and, three years later, the doctorate. UCLA was fast becoming a full-fledged university offering advanced study in almost every field.

The most spectacular growth at UCLA occurred in the 25 years following World War II, when it tripled its prewar enrollment of 9,000 students and 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 581-bed teaching hospital that is now one of the largest and most highly respected in the world.

The University of California System

The University of California traces its origins to 1868, when Governor Henry H. Haight signed the Organic Act providing for California’s first “complete University.” Classes began the following year at the College of California in Oakland. The first buildings on the Berkeley campus were completed in 1873, and the University moved into its new home. The following June, the University conferred bachelor’s degrees on 12 graduates.

Today the University 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, Santa Cruz, Merced, Santa Barbara, Riverside, Irvine and, of course, Los Angeles.

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 University’s only veterinary medicine program; San Diego has excellent oceanography and marine biology programs; San Francisco is devoted exclusively to the health sciences.

Among the campuses there 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 234,000 students, over 90 percent of them California residents. About one fifth study at the graduate level. Some 150 laboratories, extension centers, and research and field stations strengthen teaching and research while providing public service to California and the nation. The collections of over 100 UC libraries on the 10 campuses are surpassed in size on the American continent only by the Library of Congress collection.

The UC faculty is internationally known for its distinguished academic achievements. On its 10 campuses the University has 31 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 the conditions for admission and granting of degrees, authorizes and supervises courses and curricula, and advises University administrators on budgets and faculty appointments and promotions. Individual divisions of the Universitywide Academic Senate determine academic policy for each campus. Students participate in policymaking at both campuswide and systemwide levels.
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. Low-income families receive top-quality treatment from School of Dentistry clinics on campus and in Venice. The Santa Monica-UCLA Medical Center’s Rape Treatment Center offers 24-hour care to victims. The School of Public Health's Community Health Promotion Program supports community-service projects to benefit poor and underserved communities, and the School of Nursing offers care through its nurse-managed Health Center at the Union Rescue Mission. The University also supports K-12 enhancement programs such as the School of the Arts and Architecture's Music Partnership Program, which funds UCLA students to be academic and musical mentors for at-risk youth.

As UCLA gives to the community, Los Angeles gives something back. The University’s 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 classic-film screenings 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.

LIFE ON CAMPUS

Just five 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. Some 327 buildings on 419 acres house the College of Letters and Science plus 11 professional schools and serve more than 39,593 students.

A UNIQUE SETTING

The Romanesque architecture of UCLA’s early buildings blends with the modern design of new structures and provides 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.

To give a feel for the dynamic atmosphere at UCLA, Undergraduate Admissions and Relations with Schools offers tours tailored to prospective undergraduates. See http://www.admissions.ucla.edu/tours.htm or call (310) 825-8764 or 206-3719.

A LARGE CAMPUS WITH A COMFORTABLE FEEL

The general campus population, some 35,552 students, is enriched by an additional 4,041 in the health sciences schools of Dentistry, Medicine, Nursing, and Public Health. While such numbers sound daunting, the University provides orientation sessions and innovative academic assistance programs to help acclimate new students and, 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, 96 percent of lower division lecture classes in 2009-10 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) who are available to talk about academic problems.

A DYNAMIC STUDENT BODY

Students at UCLA pride themselves on academic excellence. The Fall Quarter 2010 entering freshman class had an average high school GPA of 4.25, with an average composite score on the SAT Reasoning Test of 1,925 out of a possible 2,400.

One of the University’s highest priorities is to advance the diversity of its students, faculty, staff, and administrators. UCLA’s 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 63 foreign countries to study at UCLA. Ethnic minorities comprise 67.6 percent of the undergraduates and 62.5 percent of the graduate student population, and international students and scholars presently number over 5,000, 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 11 graduate and professional schools present an extraordinary richness and diversity of teaching programs. 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.

UCLA COLLEGE AND SCHOOLS

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 section of this catalog.

INTERNATIONAL EDUCATION OFFICE

The International Education Office (IEO) believes that study abroad and student exchange are exciting and broadening experiences that enrich any educational curriculum. The office works to facilitate international education by serving as the campuswide portal for the development and administration of study abroad and student exchange activity. It provides assistance to academic units seeking to develop study abroad programs, and it collaborates with the Academic Senate and departments to insure 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 Education Abroad Program (EAP), Quarter Abroad, Travel Study, Non-UC Programs, and various student exchange agreements.

Full details about the academic programs abroad, requirements, and application procedures are available in B300 Murphy Hall, (310) 825-4995. See http://www.ieo.ucla.edu.

EDUCATION ABROAD PROGRAM

The Education Abroad Program (EAP) offers short- and long-term study programs in cooperation with over 140 host universities and colleges in more than 30 countries throughout the world. Participating students remain registered on 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. The cost of study is slightly more expensive than the cost of studying on campus. While on EAP, students are eligible for financial assistance. See http://www.ieo.ucla.edu/eap/.

TRAVEL STUDY

Travel Study offers short-term summer programs on five different continents. The Travel Study programs offer UC credit, the promise of an exciting summertime adventure, and intensive learning experiences taught by distinguished UCLA faculty members. Over 20 academic departments offer 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. Travel Study is open to all students at any academic level. There is no grade-point average requirement to participate. See http://www.ieo.ucla.edu/travelstudy/.

NON-UC PROGRAMS

The IEO also advises students about the many study abroad programs available through other universities or outside providers. Students should check with IEO to make sure those organizations are credible and to learn about the policies involved in taking a planned academic leave (PAL) of absence for study abroad and the transfer of credit back to UCLA from other institutions. See http://www.ieo.ucla.edu/nonucprograms/.

SUMMER SESSIONS AND SPECIAL PROGRAMS

Throughout the summer, UCLA offers more than 700 courses from approximately 60 UCLA departments in six-, eight-, nine-, and 10-week sessions. In addition, more than 30 specialized institutes offer concentrated programs in business, the arts, law, medicine, languages, and other subjects. Travel Study programs offer the option to study language, culture, and history as part of an exciting and challenging travel experience. Many students take advantage of Summer Sessions to enroll in courses they were unable to take during the year, repeat courses in which they may have done poorly, lighten their academic load for the following term, or complete graduation requirements more quickly. Some special programs are designed for advanced high school students.

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 session must follow admission procedures described in the Undergraduate Study and Graduate Study sections of this catalog.

Regularly enrolled undergraduate students may attend UCLA 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. Financial aid funds are available to UCLA students.

Regularly enrolled graduate students may, with departmental approval, take regular session courses offered in Summer Sessions for credit toward a master’s or doctoral degree; consult a graduate adviser in advance concerning this possibility. Summer Sessions courses may also satisfy the academic residence requirement for master’s or doctoral 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 in 1147 Murphy Hall, (310) 825-4101. See http://www.summer.ucla.edu.

UCLA EXTENSION

With over 65,000 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 UCLA Extension’s 4,500 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, widely used for relicensure and other professional/career-related purposes.

Although registering for Extension courses does not constitute admission to regular session, 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 section of this catalog.

The Extension Advisory Service offers assistance in planning long- or short-term study through Extension. The office is located in 114 UCLA Extension Building, 10995 Le Conte Avenue, (310) 206-6201. See http://www.uclaextension.edu.

To obtain the current UCLA Extension Catalog, request a copy at the website above or contact the Registration Office at (310) 825-9971.

UCLA INTERNATIONAL INSTITUTE

The UCLA International Institute comprises more than 20 multidisciplinary research centers that focus on major regions of the world and on global issues that cut across regional boundaries. The institute serves as the focal point for international research and teaching at UCLA. It also coordinates formal agreements concerning student exchange and research collaboration with foreign universities.

The U.S. Department of Education has recognized the institute’s excellence in area studies by designating National Resource Centers in East Asia, Europe, Latin America, Near East, and Southeast Asia, and the National Heritage Language Research Center. The Asia Institute acts as a catalyst for interdisciplinary teaching and research among six specialized Asian studies centers. The Burke Center for International Relations fosters research and promotes discussion on relevant topics of international relations, U.S. foreign policy, global, political, military, and economic matters, and international law and dispute resolution. All of the centers have formed extensive scholarly alliances with institutions of higher education around the world.

The institute is also home to the Fulbright Program for Greater Los Angeles, which hosts international Fulbright scholars and introduces them to the community. The International Visitors Bureau serves as a liaison between UCLA and international academic and professional leaders while hosting more than 500 visitors each year in programs that incorporate the intellectual, cultural, ethnic, and linguistic diversity of the campus and greater Los Angeles. The Center for World Languages provides research that enhances foreign language teaching, learning, and testing to meet student, academic, and professional needs and serves local, national, and international agencies in the design, implementation, and evaluation of programs dedicated to modern language education. See http://www.international.ucla.edu or call (310) 825-4811.

RESEARCH PROGRAMS

At any given time, more than 5,000 funded research programs are in progress at UCLA. For information on any of the programs listed below, see http://www.research.ucla.edu/labs/.

ORGANIZED RESEARCH UNITS

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

BRAIN RESEARCH INSTITUTE

The Brain Research Institute (BRI) has one of the largest programs for neuroscience research and education in the country, with nearly 300 scientists from 26 departments involved in every aspect of neuroscience research from molecular organization to human behavior. The BRI provides 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 school outreach program and a joint educational program with UCLA Extension. See http://www.bri.ucla.edu or call (310) 825-5061.

CENTER FOR EUROPEAN AND EURASIAN STUDIES

The Center for European and Eurasian Studies (CEES) develops and coordinates teaching and
research on Russia and the successor states of the former Soviet Union, as well as the countries of western Europe, through conferences, lectures, seminars, and academic exchange programs with European and Russian institutions. It also sponsors an interdepartmental undergraduate major and provides fellowships to graduate students in European area studies. See http://www.international.ucla.edu/euro/ or call (310) 825-4060.

**CENTER FOR MEDIEVAL AND RENAISSANCE STUDIES**

The Center for Medieval and Renaissance Studies (CMRS) supports the research activities of some 140 faculty members in 28 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 Ph.D. graduates. See http://www.cmrs.ucla.edu or call (310) 825-1880.

**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. See http://www.c1718x.cs.ucla.edu or call (310) 206-8552.

The center administers the William Andrews Clark Memorial Library, located 13 miles from UCLA, which specializes in seventeenth- and eighteenth-century British works. It also has a renowned collection centering on Oscar Wilde and his era and significant holdings of modern fine printing and Western Americana. See http://www.humnet.ucla.edu/humnet/clarklib/ or call (323) 731-8529.

**CENTER FOR THE STUDY OF WOMEN**

The Center for the Study of Women (CSW) draws on the expertise of more than 245 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, as well as an annual graduate student research conference. See http://www.csw.ucla.edu or call (310) 825-0590.

**COTSEN INSTITUTE OF ARCHAEOLOGY**

The Cotsen Institute of Archaeology 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 35 researchers and many graduate students and volunteers in 11 associated academic departments. Facilities include the Ceramics Research Group, Computer Imaging of Archaeological Data, Lithic Analysis Research Group, 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 provides a forum for the public presentation of archaeological discoveries and advances. See http://www.ioa.ucla.edu or call (310) 206-8934.

**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 Ph.D. graduate students that include the development of multimedia computer-based learning technologies. See http://www.crump.ucla.edu or call (310) 825-6539 or 825-4903.

**DENTAL RESEARCH INSTITUTE**

The Dental Research Institute (DRI) fosters professional training and public education as it focuses on the basic mechanisms of disease in the orofacial region. Members include scientists in molecular biology, immunology, virology, biochemistry, pharmacology, pathology, genetics, developmental biology, neurobiology, and neuropathology. Research includes molecular oncolgy, viral oncology, molecular mechanisms of periodontal diseases, dental implantology, orofacial pain, neuroimmunology, molecular immunology, HIV immunology, and wound repair. The DRI contributes to educational activities in the form of quarterly seminars in the UCLA Center for the Health Sciences. See http://www.dentistry.ucla.edu:8000/Dentistry/research/research-centers-and-institutes or call (310) 206-3048.

**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 sponsors the degree programs in Middle Eastern and North African Studies and in Islamic Studies. Resources of the center 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. See http://www.international.ucla.edu/cnes/ or call (310) 825-1181.
INSTITUTE OF AMERICAN CULTURES

The Institute of American Cultures (IAC) oversees four ORUs associated with UCLA ethnic studies centers. Applying the University’s capabilities to the analysis and solution of social issues, the institute makes funds available for research and fellowships and promotes the study and illumination of the histories of African Americans, American Indians, Asian Americans, and Chicanos/Chicanas. See http://www.gdnet.ucla.edu/iacweb/iachome.htm or call (310) 794-5115.

Ralph J. Bunche Center for African American Studies

The Bunche Center for African American Studies conducts and sponsors research on the African American experience, coordinates the Afro-American studies curriculum, publishes research results, and sponsors community service programming. See http://www.bunche.ucla.edu/newsite/index.html or call (310) 825-7403.

American Indian Studies Center

The American Indian Studies Center (AISC) serves as an educational and research catalyst and includes a library, postdoctoral fellowship programs, a publishing unit that produces books and a quarterly journal, and a student/community relations unit. See http://www.isc.ucla.edu or call (310) 825-7315.

Asian American Studies Center

The Asian American Studies Center (AASC) seeks to increase the 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 fellowships. See http://www.aasc.ucla.edu or call (310) 825-2974.

Chicano Studies Research Center

The Chicano Studies Research Center (CSRRC) promotes the study and dissemination of knowledge on the experience of the 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. See http://www.chicano.ucla.edu or call (310) 825-2363.

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. See http://www.igpp.ucla.edu or call (310) 206-2285.

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 Center for Labor Research and Education 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. See http://www.irle.ucla.edu or call (310) 794-5957.

INTELLECTUAL AND DEVELOPMENTAL DISABILITIES RESEARCH CENTER

The Intellectual and Developmental Disabilities Research Center (IDDRC) provides 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. See http://www.mrrc.npi.ucla.edu/iddrc/home.aspx or call (310) 825-9395.

JAMES S. COLEMAN AFRICAN STUDIES CENTER

The Coleman African Studies Center (JSCASC) coordinates research and teaching on Africa in the humanities, social sciences, and natural sciences, as well as in the schools of Arts and Archite, 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. See http://www.international.ucla.edu/africa/ or call (310) 825-3686.

JULES STEIN EYE INSTITUTE

The Jules 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. Outpatient, inpatient, and surgical facilities are provided. See http://www.jsei.org or call (310) 825-5053.

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

The Jules Stein Eye Research Center is one of the best equipped centers for research and treatment of eye diseases in the world.
Latin American Institute

The Latin American Institute 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. See http://www.la.i.ucla.edu or call (310) 825-4571.

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 30 MBI members and the Institute for Genomics and Proteomics, as well as the administration of the Molecular Biology Interdepartmental Ph.D. Program and the UCLA ACCESS to Programs in the Molecular, Cellular, and Integrative Life Sciences. See http://www.mbi.ucla.edu or call (310) 825-1018.

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-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, laser-plasma interactions, and the use of plasma in applications ranging from particle accelerators to the processing of materials and surfaces used in microelectronics or coatings. See http://www.physics.ucla.edu/psti/ or call (310) 825-4789.

UCLA-DOE Laboratory of Structural Biology and Molecular Medicine

The UCLA-DOE Laboratory of Structural Biology and Molecular Medicine (LSBMM), funded through a Department of Energy contract, conducts research in molecular nuclear medicine and structural biology and genetics. Laboratory 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, nuclear magnetic resonance, protein expression, and X-ray crystallography facilities. See http://www.doe-mbi.ucla.edu/overview/overview/ or call (310) 825-3754.

Specialized Research Centers, Laboratories, and Institutes

Additional research centers, laboratories, and institutes advance scholarship in all fields. The breadth of research conducted on campus is reflected in undertakings as diverse as the Center for Astrobiology (http://www.astrobiology.ucla.edu)—which is developing new strategies for Mars exploration—and the Jonsson Comprehensive Cancer Center (http://www.cancer.ucla.edu)—one of only 40 comprehensive centers in the nation. For a list of research centers, laboratories, and institutes, see http://www.research.ucla.edu/labs/.

Interdisciplinary activities in the social sciences include the nationally respected UCLA Anderson Forecast (http://www.uclaforecast.com) in UCLA's John E. Anderson Graduate School of Management and the Center for Study of Evaluation and the National Center for Research on Evaluation, Standards, and Student Testing (http://www.cse.ucla.edu) in the Graduate School of Education and Information Studies, which are at the forefront of efforts to improve the quality of education and learning in America.

In the health sciences, research ranges from improving the quality of life for Alzheimer patients and caregivers at the UCLA Alzheimer's Disease Center (http://www.adc.ucla.edu) to epidemiology, immunology, and the clinical management of AIDS at the UCLA AIDS Institute (http://www.uclaaidsinstitute.org) and the Center for Clinical AIDS Research and Education (http://www.uclacarecenter.com). The Fernald Child Study Center (http://www.psych.ucla.edu/center-and-programs/fernald-child-study-center/) focuses on the study and treatment of a variety of childhood behavioral problems and learning disorders.

In the physical sciences and engineering, the Institute for Pure and Applied Mathematics (http://www.ipam.ucla.edu) makes connections between a wide spectrum of mathematicians and scientists and broadens the range of applications in which mathematics is used. The UCLA Logic Center (http://www.logic.ucla.edu) fosters teaching and research in logic, broadly understood to include all areas of mathematical and philosophical logic, as well as the applications of logic to philosophy, linguistics, and computer science. On other frontiers, the Center for Embedded Networked Sensing (http://research.cens.ucla.edu), a National Science Foundation Science and Technology Center, develops embedded networking sensing systems to monitor and collect information on plankton colonies, endangered species, soil and air contaminants, medical patients, and buildings, bridges, and other man-made structures.

The Center for Study of Urban Poverty (http://www.cusp.ucla.edu) initiates new research on issues related to urban poverty and sponsors seminars in the field. The Center for Policy Research on Aging (http://publicaffairs.ucla.edu/content/center-policy-research-aging) addresses the significant issues of an aging society through policy analysis, dissemination of information, and technical assistance to the public and private sectors.
SUPPORTING RESOURCES

As UCLA students and scholars advance knowledge, illuminate the past, shape the present, and uncover the future, they rely on resources that support their endeavors in all fields. From a top-rated library to outdoor nature reserves, the campus is well-equipped to meet diverse scholastic needs.

ART GALLERIES AND MUSEUMS

The leading arts and cultural center in the West, UCLA museums, galleries, and gardens provide eclectic resources ranging from the ancient to the avant-garde.

FOWLER MUSEUM AT UCLA

The Fowler Museum at UCLA is internationally known for the quality of its collections, which 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. For more information on hours and admission, see http://www.fowler.ucla.edu or call (310) 825-4361.

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. See http://hammer.ucla.edu/collections/detail/collection_id/5 or call (310) 443-7078.

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 Rodin, Matisse, Calder, Arp, Falkenstein, Lachaise, Lipchitz, Moore, Miró, Hepworth, Noguchi, 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. See http://hammer.ucla.edu/collections/detail/collection_id/6 or call (310) 443-7055 or 443-7041.

NEW WIGHT GALLERY

The New Wight Gallery is an exhibit space for visual arts, including student and faculty exhibitions. The gallery is housed in 1100 Broad Art Center, (310) 825-0557. See http://www.art.ucla.edu/gallery/index.html.

UCLA HAMMER MUSEUM

The UCLA 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. For information on programming, hours, and docent tours, see http://hammer.ucla.edu or call (310) 443-7000.

LIBRARIES

The UCLA Library, a campuswide network of libraries serving programs of study and research in many fields, is among the top 10 ranked research libraries in the U.S. The total collections number more than nine million volumes, and nearly 78,000 serial titles are received regularly.

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 the library's web-based online information systems. The UCLA Library Catalog contains records for all UCLA Library 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 provides 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 College Library electronic reserves and electronic journals, texts, reference resources, periodical indexes, and abstracts. See http://www.library.ucla.edu.

ARTS LIBRARY

Housed in the Public Affairs Building, the Arts Library collects material on architecture, architectural history, art, art history, design, film, television, photography as fine art, studio art, and theater. 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, posters, lobby cards, press kits, and West Coast theater playbills. See http://www.library.ucla.edu/libraries/arts/index.cfm or call (310) 206-5425.

**CHARLES E. YOUNG RESEARCH LIBRARY**
The Young Research Library 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. The Department of 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. See http://www.library.ucla.edu/libraries/researchlibrary/index.cfm or call (310) 825-1938 or 825-1323.

**COLLEGE LIBRARY**
The College Library, located in the Powell Library Building, features collections and services in support of the undergraduate curriculum in the humanities, social and physical sciences, and mathematics. Course reserve materials, including books, articles, audiocassettes, homework solutions, lecture notes, and Academic Publishing Service Readers, are available for loan. The College Library Instructional Computing Commons, located on the first floor of Powell Library, provides students with access to computers and multimedia equipment, and Night Powell provides study space in a late-night reading room. See http://www.library.ucla.edu/libraries/college/index.cfm or call (310) 825-1938 or 825-9389.

**EUGENE AND MAXINE ROSENFIELD MANAGEMENT LIBRARY**
Located in the John E. 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. See http://www.anderson.ucla.edu/library.xml or call (310) 825-3138.

**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 580,000 bound volumes. See http://www.law.ucla.edu/library/Pages/default.aspx or call (310) 825-4743 or 825-6414.

**LOUISE M. DARLING BIOMEDICAL LIBRARY**
The Darling Biomedical Library, located in the Center for the Health Sciences, serves all the UCLA health and sciences departments and schools and the 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 659,000 print volumes and 3,170 journal subscriptions. See http://www.library.ucla.edu/libraries/biomed/index.cfm or call (310) 825-4904.

**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. It also houses the Archive of Popular American Music, a special collection of published and manuscript sheet music, recordings, and related materials. 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. See http://www.library.ucla.edu/libraries/music/index.cfm or call (310) 825-4882 or 825-1353.

**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. See http://www.library.ucla.edu/libraries/eastasian/index.cfm or call (310) 825-4836.

**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/Engineering
and Mathematical Sciences 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-Geophysics in the Geology Building houses materials on geology, geophysics, geochemistry, space physics, planetary science, regional geology, paleobiology, micropaleontology, invertebrate paleontology, ore deposits, geomorphology, hydrology, and chemical oceanography. See http://www.library.ucla.edu/libraries/sel/index.cfm or call (310) 825-4951, 825-1055, or 825-3982.

SPECIAL ARCHIVES AND COLLECTIONS

In addition to the extensive collections of the University 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 (http://www.bunche.ucla.edu/newsite/index.html) contains materials reflecting the African American experience in the social sciences, arts, and humanities. The American Indian Studies Center Library (http://www.aisc.ucla.edu/lib/aisc library.shtml) houses a collection on American Indian life, culture, and state of affairs in historical and contemporary perspectives, while the Asian American Studies Center Reading Room/Library (http://www.aasc.ucla.edu/library/default.asp) features Asian and Pacific Island American resources.

Materials related to Chicano and Latino cultures are housed in the Chicano Studies Research Center Library (http://www.chicano.ucla.edu/library/default.asp), and the William Andrews Clark Memorial Library (http://www.humnet.ucla.edu/humnet/clarklib/) contains rare books, manuscripts, and other noncirculating materials on English culture (1641 to 1800). The English Reading Room (http://www.english.ucla.edu/index.cfm) or call (310) 825-0755.

INSTRUCTIONAL MEDIA COLLECTIONS AND SERVICES AND LABORATORY

The Instructional Media Collections and Services, located in the Powell Library Building, is UCLA’s central resource for the 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. See http://www.oid.ucla.edu/units/imcs/ or call (310) 825-0755.

The Instructional Media Laboratory provides access to course- or textbook-related audio, interactive, and videotape programs. Students, assigned by faculty to study specific supplementary materials, may learn at their own pace and time. See http://www.oid.ucla.edu/units/ilmab/ or call (310) 206-1211.

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’s 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, Warner Brothers, Sony/Columbia, Republic, RKO, New World Pictures, and Orion. 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’s exhibition program presents evening screenings and discussions that focus on archival materials, new work by independent filmmakers, and an array of international films. See http://www.cinema.ucla.edu or call (310) 206-8013.

The Archive Research and Study Center (ARSC) in the Powell Library Building (310-206-5388) provides on-site viewing of the Film and Television Archive’s collections and research consultation to students, faculty, and researchers.

OTHER COLLECTIONS

The Ethnomusicology Archive (http://www.ethnomusic.ucla.edu/archive/) houses sound and audiovisual recordings of folk, ethnic, and non-Western classical music, while the Social Science Data Archive (http://dataarchives.ss.ucla.edu/) contains a collection of statistical databases for the social sciences. The UCLA Lab School Gonda Family Library (http://www.labschool.ucla.edu/learning/library/) features contemporary materials for children from kindergarten through junior high school and adult works on children’s literature.
ABOUT UCLA

20

The Japanese Garden is a Kyoto-style retreat.

The Botanical Garden offers thousands of plants for study and enjoyment.

COMPUTER SUPPORT

The exciting pace of computer technology demands an environment where information systems are recognized as a strategic requirement with a strong focus of attention, and where there is a solid technology foundation already in place. UCLA provides that environment and ensures hardware, software, and training to support research and study.

ACADEMIC TECHNOLOGY SERVICES

Academic Technology Services (ATS) provides resources and services that support the UCLA distributed computing environment. Through its five service areas ATS seeks to facilitate cross-departmental information technology initiatives, provide specialized resources to faculty members and students in pursuit of their research and instructional goals, and leverage the volume purchasing power of the University. See http://www.ats.ucla.edu or call (310) 825-6635.

Training and consulting services include classes and online seminars in statistical applications, high-performance computing, scientific visualization, and geographic information systems. See http://www.ats.ucla.edu/classes/ or call (310) 825-7431.

Through Software Central, ATS informs the UCLA community of software available at educational or special volume discounts and provides technical support for many applications. See http://www.softwarecentral.ucla.edu or call (310) 206-4780.

ADVANCED TECHNOLOGIES

Advanced Technologies offers integrated services to faculty members. Areas of expertise include technical and administrative grant development support; storage and management tools for research and instructional data; analysis and interpretation of complex data sets through statistical and visualization support; high-performance network consulting services for research; and high-performance computing through Beowulf clusters, consulting support for faculty to access the National Supercomputer Centers, and support for the development of central and local commodity-based Linux clusters. See http://www.ats.ucla.edu/clusters/hpc/ or call (310) 206-7323.

DISABILITIES AND COMPUTING PROGRAM

The Disabilities and Computing Program (DCP) provides adaptive technology services and support to students, faculty, and staff with disabilities, to faculty who are working with students with disabilities, and to departments. The DCP also coordinates access to computers, local area networks, and online resources for people with disabilities. See http://www.dcp.ucla.edu or call (310) 206-7133 or 206-6004.

STUDENT COMPUTER LABORATORIES

Student laboratories are supported through Academic Technology Services and the College Library Instructional Computing Commons. See Student Services later in this chapter for information.

PARKS, RESERVES, AND NATURAL SCIENCE RESOURCES

The geography of Southern California is conducive to research in the natural sciences. The 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. See http://www.eeb.ucla.edu/dickey/ or call (310) 825-1282.

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 veterinary medical and husbandry programs throughout the campus. See http://www.dlam.ucla.edu or call (310) 794-0161.

HANNAH CARTER JAPANESE GARDEN

One mile from the UCLA campus in Bel Air, the Japanese Garden provides a unique illustration of art and nature for courses such as landscape architecture, environmental design, East Asian studies, and art classes. The Kyoto-style terraced garden was designed by Japanese artisans using native plants and artifacts. Traditional features such as a teahouse, shrine, antique stone water basins, and a koi pond are enjoyed by faculty, students, school and community groups, and others. Visits are by reservation only. See http://www.japanesegarden.ucla.edu or call (310) 794-0320.

MARINE SCIENCE CENTER

The Marine Science Center coordinates marine-related teaching and research on campus and facilitates interdepartmental interaction of faculty members and students. UCLA offers one of the broadest interdisciplinary educational programs in marine sciences in the U.S. Field trips for marine-related courses and access to research sites in the Santa Monica Bay, Channel Islands, and the Southern California Bight are provided by UCLA’s 68-foot research vessel Sea World UCLA. See http://www.msc.ucla.edu or call (310) 206-8247.

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
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.

SERVICES FOR STUDY

From academic advising to advanced computer support, UCLA services for study 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 Advising and Academic Assistance in the Undergraduate Study section of this catalog). In addition, special 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. Using BOL, students enroll in classes or access student records through URSA, check class availability in the Schedule of Classes, search the UCLA Library collections, access their Study Lists through MyUCLA, and connect to a range of campus events, programs, and services.

Bruin OnLine services include dial-up access to the campus backbone network and the Internet, e-mail accounts, and space for personal webpages. Wireless Internet access is available in select campus locations for BOL account holders. BOL Internet access software can be downloaded from the BOL website. Help desk services are available online, by telephone at (310) 267-4357, and at the BOL office in Kerckhoff Hall. See http://www.bol.ucla.edu.

COMPUTER LABORATORIES

Student laboratories are supported through Academic Technology Services (ATS) and the College Library Instructional Computing Commons (CLICC, http://www.clicc.ucla.edu), a collaborative effort between ATS, Center for Digital Humanities (http://cdh.ucla.edu/labs/), Social Sciences Computing (http://computing.sscnet.ucla.edu), Office of Instructional Development, and College 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 websites listed above for further information.

COURSE WEB PAGES

The Instructional Enhancement Initiative assures that all undergraduate nontutorial courses in the College of Letters and Science and the Henry Samueli School of Engineering and Applied Science provide 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.

LECTURE NOTES AND COURSE READERS

For certain courses, students may subscribe to Lecture Notes, which publishes concise weekly summaries of about 100 lecture classes. See http://www.uclaestore.com/ucla/outerweb/lecturenotes.asp or call (310) 825-8016.

Academic Publishing provides custom course readers, obtaining 5,000 copyright authorizations each year. See http://www.uclaestore.com/ucla/outerweb/academicpublishing.asp or call (310) 825-2831.

MYUCLA

MyUCLA provides a portal to individual student information. Features include a personalized Study List showing classes and class information such as grades; a notifications section for important announcements; a subscriptions section to access online information from newspapers, journals, or magazines or from University departments, clubs, and organizations; a personal calendar; and links to UCLA online resources, including URSA, the Schedule of Classes, and UCLA
Ashe Center, such as emergency room services, is each
The Ashe Student Health and Wellness Center in
ARThUR ASHE STUDENT HEALTH AND
SERVICES FOR HEALTH AND
VA chapters 30-32, 35, and 1606.
issues fee waivers to dependents of California veterans
fits, tutorial assistance, and the work-study program;
(310) 825-5391, provides information for veterans and
The Veterans Affairs coordinator, 1113 Murphy Hall,
VETERANS AFFAIRS SERVICES
through University Records System Access (URSA),
UCLA students acquire academic, financial, and
personal information from their University academic
records and enroll in classes. URSA operates Sunday
from 6 p.m. through Tuesday at 1 a.m. and Tuesday
through Saturday from 6 a.m. to 1 a.m., including hol-
days. See http://www.ursa.ucla.edu.
For most students, URSA provides the easiest way to
gain real-time access to academic, financial, and
personal records. The site is designed with an intuitive
visual interface that walks students through the differ-
ent steps of the procedure they are trying to accom-
plish, whether it be to check their billing accounts,
change address information, view and print Study Lists
or Degree Progress Reports (DPRs), or see term grades.
URSA also provides a convenient way to enroll in
classes, to verify enrollment appointment times, and to
view real-time enrollment counts.

VETERANS AFFAIRS SERVICES
The Veterans Affairs coordinator, 1113 Murphy Hall,
(310) 825-5391, provides information for veterans and
eligible dependents about veterans’ educational ben-
fits, tutorial assistance, and the work-study program;
issues fee waivers to dependents of California veterans
who are deceased or disabled because of service- con-
nected injuries and who meet the income restrictions
in Education Code Section 10652; and certifies stu-
dent status for recipients of educational benefits under
VA chapters 30-32, 35, and 1606.

SERVICES FOR HEALTH AND
SAFETY
ARTHUR ASHE STUDENT HEALTH AND
WELLNESS CENTER
The Ashe Student Health and Wellness Center in
Westwood Plaza (310-825-4073) is an out-
patient clinic for UCLA students. Most ser-
vice fees are subsidized by registration fees, and
a current BruinCard is required for service.
Core (prepaid) services include visits, most
procedures, X rays, and some laboratory
procedures. Noncore (fee) services, such as
pharmaceuticals, injections, orthopedic
device, and some laboratory procedures,
are less costly than elsewhere. If students
withdraw during a school term, all Ashe
Center services continue to be available on
a fee basis for the remainder of that term,
effective from the date of withdrawal.
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 supplemental medical insurance either
through the UCLA-sponsored University of California
Student Health Insurance Plans or other plans that
provide adequate coverage. Adequate medical insur-
ance is a condition of registration. See Registration in
the Undergraduate Study and Graduate Study sections
of this catalog.
Consult the Ashe Center website for specific infor-
mation on its primary care, women’s health, and men’s
health clinics, as well as on dental care which is avail-
able to students at discounted rates. See http://www.
.studenthealth.ucla.edu.
For emergency care when the Ashe Center is closed,
students may obtain treatment at the UCLA Medical
Center Emergency Room on a fee-for-service basis.

MENTAL HEALTH SERVICES
Services for mental health range from routine counsel-
ing 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 prob-
lems 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 infor-
mation, support, and resources for members of the
UCLA community who have been raped or sexually
assaulted—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. See http://www.counseling.ucla.edu.
CAPS is also a designated Sexual Harassment Informa-
tion Center, as well as a campus Harassment Informa-
tion Center, available to all UCLA students (see
Harassment in the Appendix for more information).

STUDENT SAFETY AND SECURITY
Dial 911 from any campus phone for police, fire, or
medical emergencies. For nonemergency informa-
tion, contact the UCLA Police Department. See http://
www.ucpd.ucla.edu or call (310) 825-1491.
The police department provides a free Campus Escort
Service every day of the year from dusk to 1 a.m. Uni-
formed community service officers (CSOs)—specially
trained UCLA students—walk students, staff, faculty,
and visitors between campus buildings, local living
areas, or Westwood Village. See http://map.ais.ucla.
edu/go/1000806 or call (310) 794-WALK.
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 materials, and referrals—increased physical and psychological preparedness and heighten awareness of the complex issues of rape, sexual assault, and relationship violence. See http://www.counseling.ucla.edu or call (310) 825-0768.

Cardiopulmonary resuscitation (CPR) and basic emergency care courses are offered by the Center for Prehospital Care and can be organized most days and times. See http://www.cpc.mednet.ucla.edu or call (310) 267-5959.

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. See http://www.ehs.ucla.edu or call (310) 825-5689.

ASSOCIATED STUDENT SERVICES

Founded when UCLA opened in 1919, the Associated Students UCLA provides services to the campus community through student government, student media, and services and enterprises. Every registered UCLA student is a member of ASUCLA. See http://www.asucla.ucla.edu.

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 from the Student Fee Advisory Committee to the committees of the Academic Senate. It sponsors various student journals, programs, and social events, including the Melnitz Movies film program. See http://gsa.asucla.ucla.edu or call (310) 206-8512.

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.

The breadth of USA activities offers an invaluable service to the campus and surrounding communities and provides students the opportunity to participate in and benefit from these endeavors. For example, USA programs benefit both campus and community through programs to 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. See http://students.asucla.ucla.edu.

CAMPUS EVENTS

Each year approximately 40,000 students, faculty, and staff attend programs of the Campus Events Commission (CEC), including a low-cost film program, a 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 programs—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, Whoopie Goldberg, and Tom Hanks.

The Concert Program brings new and name performing artists like Rage Against the Machine or A Tribe Called Quest to UCLA for free and affordably priced concerts. See http://students.asucla.ucla.edu/cec/ or call (310) 825-1958.

The Cultural Affairs Commission sponsors art exhibits in the Kerckhoff Hall Art Gallery and the JazzReggae Festival. See http://www.culturalaffairsla.com or call (310) 825-6564.

PUBLICATIONS, WEB, AND BROADCAST MEDIA

Publications and media provide 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. See http://www.studentmedia.ucla.edu or call (310) 825-2787.
**Daily Bruin**

The Daily Bruin, with a circulation of 10,000, 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. See http://www.dailybruin.com or call (310) 825-9898.

**Newsmagazines**

Seven print newsmagazines reflecting the diversity of the campus community are published each term. Al-Talib, Fem, Ha’Am, La Gente de Aztlan, 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, and transgender; 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 community portal website.

**UCLAradio**

UCLAradio broadcasts live over the Internet from http://uclaradio.com and features college alternative, hip-hop, jazz, and world music. It also covers select Bruin football, basketball, and baseball games and a lineup of sports talk shows. Studios are in Ackerman Union, (310) 825-6955; 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. Available each June, 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. See http://www.bruinlife.com or call (310) 825-2640.

**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. For hours and locations of all the restaurants, see http://www.asucla.ucla.edu/restaurants/hours.asp.

**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. See http://www.uclastore.com.

The UCLA Store—Ackerman Union, (310) 825-7711, has eight departments. The Textbooks department 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 the UCLA Faculty Authors section. The Computer Store carries personal computers, peripherals, accessories, and software at low academic prices. Essentials offers school and office supplies, including consumables for computer printers. BearWear specializes in UCLA emblematic merchandise. Fast Track carries active sportswear for men and women, plus an extensive Clinique counter. Market is a convenience store, with snacks, health and beauty aids, gifts, greeting cards, and cut flowers.

The UCLA Store—Health Sciences, http://www.uclastore.com/ucalhs/, (310) 825-7721, specializes in books and supplies for students in dentistry, medicine, nursing, public health, and related areas. UCLA Store—Lu Valle Commons, (310) 825-7238, 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, 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, http://www.collegestore.org/ge2/portraits.asp, (310) 206-8435 or 206-0889, for their senior yearbook portraits. Graduation Etc., http://www.uclastore.com/gradetc/, (310) 825-2587, sells caps, gowns, and hoods for degree ceremonies and provides announcements, diploma mounting, and other graduation-related products and services.

On the lighter side, ASUCLA operates Game On, (310) 794-2122, with PC, Xbox 360, PS3, and Wii electronic games.

**Services for Student Life**

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. See http://www.housing.ucla.edu or call (310) 206-7011.
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, two residential suites, and five residential plazas accommodate over 9,500 undergraduate students. All on-campus housing is coed and within walking distance to classrooms.

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

To apply for on-campus housing, the application must be completed online by the deadlines set by the housing office. See http://map.ais.ucla.edu/go/1001744. Students applying for Winter or Spring Quarter are assigned on a space-available basis in the order applications are received.

Per-person costs for the academic year start at just under $10,500. Consult the housing office for the range of price options. See http://map.ais.ucla.edu/go/1003323.

The Office of Residential Life is responsible for student conduct in residence halls and suites and provides professional and student staff members to counsel residents on programming and other problems. See http://www.orl.ucla.edu or call (310) 825-3401.

The office is also a designated Sexual Harassment Information Center and Harassment Information Center available to all UCLA students (see Harassment in the Appendix for more information).

Off-Campus Housing
Within walking distance of campus, the University maintains seven 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. See http://map.ais.ucla.edu/go/1001723 or call (310) 983-1300.

Off-campus apartments for married, single-parent, and single graduate students include unfurnished studio, one-, two-, and three-bedroom units, some located within walking distance of campus and others about five miles from campus. Assignment to several of the apartment units is by wait list; students should not wait until they have been accepted to UCLA to apply. Verification of marriage and/or copies of children’s birth certificates must accompany applications for married and family housing. See http://map.ais.ucla.edu/go/1001376 or call (310) 398-4692.

The UCLA Community Housing Office provides 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. The office also has bus schedules, area maps, and neighborhood profiles. A current BruinCard or letter of acceptance is required for service. See http://www.cho.ucla.edu or call (310) 825-4491.

Many of the fraternities and sororities at UCLA own chapter houses. Complete information and member-ship requirements are provided by Fraternity and Sorority Relations. See http://www.greeklife.ucla.edu/housing.html or call (310) 825-6322.

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. See http://www.ucu.org or call (310) 477-6628.

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

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

Students with a hold from an office with which they have an outstanding obligation (financial, academic, or administrative) may not receive services until the hold is released by the initiating office. For details on outstanding holds and initiating offices, check URSA at http://www.ursa.ucla.edu.

The BruinCard center is located in 123 Kerkhoff Hall. See https://secure.bruin.card.ucla.edu to check account balance, make deposits, view recent transactions, and report lost or stolen cards or call (310) 825-2336.

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 provides services to all UCLA students, including specialized services for transfer and reentry 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 (http://www.veterans.ucla.edu, 310-206-6915) which offers services specifically designed to assist students who are U.S. armed forces veterans or current military members. See http://www.brc.ucla.edu or call (310) 825-3945.

Career Center
The UCLA Career Center, located in the Strathmore Building, offers career planning and employment assis-
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. In addition, the Career Center 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 volume of part-time, temporary, and seasonal employment leads advertised through the Career Center’s 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.

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, 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. See http://www.tickets.ucla.edu or call (310) 825-2101.

CHILD CARE

UCLA Early Care and Education (ECE) operates three child care centers near the University and student housing. Care is provided 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 are available for eligible student families. See http://www.ece.ucla.edu or call (310) 825-5086.

The ECE Child Care Resource Program helps parents make off-campus child care arrangements and coordinates a Choosing Child Care Forum each month. See http://map.ais.ucla.edu/go/1000688 or call (310) 825-8474.

The ECE University Village Kindergarten Program offers a multicultural, full-day science-based curriculum for five-year-old children of UCLA students, faculty, and staff. It also offers summer enrichment activities. See http://map.ais.ucla.edu/go/1000391 or call (310) 915-5827.

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. See http://upns.bol.ucla.edu or call (310) 397-2735.

DEAN OF STUDENTS

The Office of the Dean of Students 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.

In addition, 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 Office of the Dean of Students may also administer campus discipline and enforce 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: University Policies in the Appendix for more information. See http://www.deanofstudents.ucla.edu or call (310) 825-3871.

INTERNATIONAL STUDENT SERVICES

International student services in Bradley Hall provide support for UCLA’s international community, particularly for nonimmigrant students. An orientation program helps international students plan their academic objectives, and 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 is a designated Sexual Harassment Information Center for international students and a Harassment Information Center available to all UCLA students (see Harassment in the Appendix for more information). In addition, the center provides visa assistance for faculty members, researchers, and postdoctoral scholars. See http://www.internationalcenter.ucla.edu or call (310) 825-1681.
LESBIAN GAY BISEXUAL TRANSGENDER CAMPUSS RESOURCE CENTER

The Lesbian Gay Bisexual Transgender (LGBT) Campus Resource Center in the Student Activities Center provides 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. See http://www.lgbt.ucla.edu or call (310) 206-3628.

OFFICE FOR STUDENTS WITH DISABILITIES

The Office for Students with Disabilities (OSD) in Murphy Hall provides 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, note takers, readers, sign language interpreters, Learning Disabilities Program, 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 assistance, 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. See http://www.osd.ucla.edu or call (310) 825-1501, TDD (310) 206-6083, fax (310) 825-9656.

For information on the Disabilities and Computing Program, see Computer Support under Supporting Resources earlier in this section.

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 by the visitor, assist in resolving an issue through mediation (including sexual harassment cases). The office is in the Strathmore Building. See http://www.ombuds.ucla.edu or call (310) 825-7627.

The office is also a designated Sexual Harassment Information Center for students, faculty, and staff, as well as a campus Harassment Information Center available to all UCLA students (see Harassment in the Appendix for more information).

PARKING AND COMMUTER SERVICES

Parking, ridesharing, and other transportation options and services are offered through UCLA Transportation Services. There are several commuting alternatives for students to get to and from campus without driving their cars. Both full-time and part-time riding opportunities are available.

Commuter Assistance-Ridesharing

The Commuter Services and Information (CSI) Office is the best place for information on transportation options. Many students form or join existing UCLA carpools or vanpools. Students can use Zimride, a Facebook application, to find one-time rides or create a carpool with fellow Facebook users. More than 160 vanpools commute to UCLA from 85 Southern California communities. Full- and part-time riding opportunities are available, and registered two- and three-person student carpools are given top priority to receive parking (see below).

Information on these and other commuting options, including an extensive network of public transit, are available online or at the CSI office in the Strathmore Building at Strathmore Drive and Westwood Plaza. See http://www.transportation.ucla.edu or call (310) 794-7433.

Parking Permits

Due to limited availability, parking at UCLA is offered to students who demonstrate the greatest need. Student parking permits are assigned through a point system that considers class standing, commute distance, employment, dependent children, and professional school obligations. Students are encouraged to apply on time and follow all application and payment guidelines in order to increase their chances of receiving a permit. Permits are not guaranteed.

When assigning parking permits to students, UCLA Parking Services gives the highest priority to carpools. Carpool permits are guaranteed to all qualified two- and three-person student carpool groups that apply on time. Student carpools park in central campus parking areas and share a discounted permit fee. Students interested in forming a carpool who need help finding other students living near them should call the CSI office at (310) 794-7433. All members of a proposed student carpool must apply in person as a group.

Most student permits are assigned for the academic year and can be paid for annually or quarterly. Renewal forms for students paying quarterly are automatically mailed before the Winter and Spring Quarter payment due dates. Students who are not offered a parking assignment during a given term or who wish to change their parking area need to reapply for the following term.

Student Parking Request forms, along with important quarterly due dates and information on how to apply for a parking permit, are available online, by calling (310) 825-6918, or in person at Parking Services. Parking request forms can also be downloaded at http://www.transportation.ucla.edu/appmain.htm.

Students with permanent disabilities who have disabled persons’ placards or DMV-issued disabled persons’ license plates, and students with short-term disabilities, may apply to the Office for Students with Disabilities for parking assignments and on-campus transportation assistance. See http://www.osd.ucla.edu or call (310) 825-1501.

Parking permits and access cards to campus lots and structures are not transferable and may be purchased
only from UCLA Parking Services. Resale is prohibited and subjects both buyer and seller to disciplinary action.

**POST OFFICES**

Campus mail is handled by UCLA Mail, Messenger, and Distribution Services, which offers full-service document processing and delivery for the campus community. See http://map.ais.ucla.edu/go/1002735 or call (310) 825-0381.

The United States Postal Service operates two express post offices for the campus, including a branch in Ackerman Union. Call (310) 206-5596 for further information.

**STUDENT LEGAL SERVICES**

Through Student Legal Services in Murphy Hall, currently registered and enrolled 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; healthcare, credit, and financial aid issues; consumer problems; and University-related issues. Assistance is available only by appointment. See http://www.studentlegal.ucla.edu or call (310) 825-9894.

**STUDENT ACTIVITIES**

The opportunities to participate in extracurricular activities at UCLA are virtually unlimited and provide 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. UCLA has over 800 different organizations recognized by the Center for Student Programming—for more than are found on almost any other university campus in the country.

**CENTER FOR STUDENT PROGRAMMING**

Organizations registered with the Center for Student Programming (CSP) 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. CSP also handles complaints of misconduct against officially recognized student organizations. See http://www.studentactivities.ucla.edu or call (310) 825-7041.

One major CSP division is Fraternity and Sorority Relations.

**Fraternity and Sorority Relations**

Fraternities and sororities have been at UCLA since the early 1920s. Today UCLA counts over 60 national and local Greek-letter organizations that make up one of the largest Greek systems on the West Coast.

Fraternity and Sorority Relations (FSR) 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, Membership Recruitment, Greek Week, New Member Forums, Dating Expectations Programs, intramural tournaments, and University-sponsored programs. See http://www.greeklife.ucla.edu or call (310) 825-6322.

FSR is a designated campus Harassment Information Center available to all UCLA students (see Harassment in the Appendix for more information).

**COMMUNITY PROGRAMS OFFICE**

The UCLA Community Programs Office (CPO) was established in 1970 by concerned students, staff, and faculty who felt that students' educational experiences at UCLA should expand outside the classroom and into Los Angeles.

Currently, the CPO houses 24 student-initiated community service projects that provide 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 underserved areas of Southern California who attend colleges and universities, and six student-initiated retention projects that seek to ensure that all students who enter UCLA actually graduate. CPO is unique because it provides a multicultural and ethnically diverse environment to the UCLA campus. See http://www.communityprograms.ucla.edu or call (310) 825-5969.

**PERFORMING ARTS**

Concerts, dance recitals, and theater productions are all part of exceptional programs offered by the Music, Ethnomusicology, Film, Television, and Digital Media, Theater, and World Arts and Cultures/Dance Departments and by UCLA Live.

**DEPARTMENT EVENTS**

The Ethnomusicology Department provides students with the opportunity to perform in various world music and jazz ensembles that provide concerts listed in the department's schedule of events. See http://www.ethnomusic.ucla.edu.

The Music Department features performances by ensembles ranging from music theater to opera. In addition, the Gluck Fellows Music Outreach Program provides community outreach through free performances throughout the Los Angeles and Southern California region. See http://www.music.ucla.edu.

The Theater Department presents a series of major productions to the general public, and the Film, Television, and Digital Media Department features student-directed films and television programs throughout the year. The School of Theater, Film, and
Television’s annual Festival of New Creative Work is a week-long celebration of film, digital media, animation, screenwriting, and acting that features everything from performance art to the classics. See http://www.tft.ucla.edu.

The World Arts and Cultures/Dance Department presents events and concerts involving departmental faculty members, guest artists, and students. Student performances include M.F.A. 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. See http://www.wac.ucla.edu.

UCLA LIVE
Since 1937, UCLA Live has served as the premier West Coast showcase for world-class performing artists and ensembles as well as innovative new work in dance, music, theater, and performance art. UCLA Live presents more than 200 public concerts and events each year, often sponsoring debut performances of new works by major artists. Through UCLA Live, the campus hosts a varied and active performance program, ranging from regular concerts by the Los Angeles Chamber Orchestra to events with Ladysmith Black Mambazo, Yo-Yo Ma, Alvin Ailey American Dance Theater, Jessye Norman, Mikhail Baryshnikov, Pina Bausch Tanztheater Wuppertal, Twyla Tharp, Stomp, Pinchas Zukerman, and Branford and Wynton Marsalis. Subject to availability, discount tickets are offered to students, faculty, and staff. See http://www.uclalive.org or call (310) 825-4401.

SPORTS AND ATHLETICS
Athletics play a major role in the University’s mission to provide 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 Collegiate Athletic Association (NCAA) championships won (107). In 2009-10 the UCLA athletic programs (men and women) placed fourth in the Directors Cup national all-around excellence survey. 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). See http://www.uclabruins.com.

UCLA also has produced a record number of professional athletes such as Troy Aikman, Eric Karros, Reggie Miller, Natalie Williams, and Corey Pavin and Olympians such as gold medalists Lisa Fernandez, Karch Kiraly, Gail Devers, Peter Vidmar, Dot Richardson, and Jackie Joyner-Kersee.

ATHLETIC FACILITIES
The major indoor arena at UCLA is the famed Pauley Pavilion, which seats 12,800 for UCLA basketball, volleyball, and gymnastics events and is currently undergoing major renovation. 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 U.S. Olympic Festival ’91. The Spieker Aquatic 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 clubhouse, was the site of the 1984 Olympic tennis competition. Easton Softball Stadium, which seats 1,300, is the home of the championship 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.

MEN’S INTERCOLLEGIATE SPORTS
UCLA is a member of the Pacific-12 Conference, which includes Arizona State University; University of Arizona; University of California, Berkeley; University of Colorado; Oregon State University; University of Oregon; Stanford University; University of Southern California; University of Utah; Washington State University; and the University of Washington. UCLA teams have won an overall total of 71 NCAA men’s championships—second highest in the nation—including 19 in volleyball, 16 in tennis, 11 in basketball, eight each in track and field and water polo, four in soccer, two each in golf and gymnastics, and one in swimming. Students can participate on the varsity level in football, basketball, track, baseball, tennis, volleyball, water polo, golf, soccer, and cross-country. Call (310) 825-8699 for further information.

WOMEN’S INTERCOLLEGIATE SPORTS
With 11 different varsity sports, the UCLA women’s program is one of the most extensive in the country, and UCLA has played an important role in establishing women’s sports as part of the NCAA. Women’s teams have won an overall total of 36 NCAA titles—second highest in the nation—including 11 in softball, seven in water polo, six in gymnastics, five in track and field, three in golf and volleyball, and one in tennis. Other nationally ranked teams are those in basketball, swimming, cross-country, and soccer. Call (310) 825-8699 for further information.

UCLA RECREATION
To help students learn new skills, meet people with similar interests, relieve stress, and increase fitness, the Department of Cultural and Recreational Affairs (CRA) oversees programs from intramural sports to outdoor adventures. See http://www.recreation.ucla.edu or call (310) 825-3701.
INTRAMURAL AND CLUB SPORTS

The UCLA Intramural Sports Program, (310) 267-5416, 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.

The Club Sports Program, (310) 267-5416, offers 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. Recognized teams exist in archery, badminton, baseball, Brazilian jiujitsu, cycling, dragon boat, equestrian, fencing, ice hockey, kendo, men's and women's lacrosse, powerlifting, quidditch, men's rowing, men's and women's rugby, running, sailing, snowboarding and skiing, men's and women's soccer, softball, surfing, swimming, table tennis, taekwondo, tennis, triathlon, men's and women's ultimate, men's and women's volleyball, men's and women's water polo, waterskiing, and wushu.

OUTDOOR ADVENTURES

Outdoor Adventures, (310) 206-1252, 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 camping, rock climbing, scuba diving, windsurfing, canoeing, kayaking, and hiking.

CLASS PROGRAMS

Noncredit recreation classes in arts, dance, fitness sports, kayaking, martial arts, rock wall, rowing, sailing, 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, and golf 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, CRA offers access to many facilities. The John R. Wooden Recreation and Sports Center has multiple gymnasiums, racquetball/handball/squash courts, a weight training facility, rock climbing wall, exercise/dance and martial arts studios, and a games lounge. The 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, eight 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, Sycamore Tennis Courts, Los Angeles Tennis Center, Intramural Fields, Student Activities Center, and Kaufman Hall for recreational sports and activities.

YOUTH AND FAMILY PROGRAMS

Youth and Family Programs, (310) 825-3701, offer exciting activities for children 3 to 17 years old. Summer programs include Bruins on Broadway for ages 8 to 15, Bruins on Water for ages 8 to 10, Camp Adventure for ages 11 to 15, Camp Bruin Kids for ages 5 to 10, Camp Bruin Tots for ages 4 and 5, Camp Explore for ages 7 to 10, Camp Voyager for ages 11 to 15, Counselors in Training for ages 15 to 17, Sunset Sleepover for ages 7 to 12, group and private lessons, and the Family Outdoor Entertainment Series. Activities combine play with skill development and deepen the fun in learning.

UCLA ALUMNI ASSOCIATION

Celebrating more than 75 years of serving the UCLA community, the UCLA Alumni Association has more than 88,000 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 Blue and Gold Week, Dinners for 12 Strangers, Spring Sing, UCLA Alumni Day, senior events, class reunions, career events, and the scholarship program.

The association offers many benefits and services, including career 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. See http://alumni.ucla.edu. Call (310) 825-2586 or, outside Los Angeles County, (800) 825-2586 for further information.
UNDERGRADUATE ADMISSION

Undergraduate Admissions and Relations with Schools
1147 Murphy Hall
(310) 825-3101
http://www.admissions.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.

APPLYING FOR ADMISSION

To apply for admission to UCLA, complete the UC Application for Admission and Scholarships. Applicants may apply for the Fall Quarter at http://www.universityofcalifornia.edu/admissions/.

One application is used for the nine UC campuses with undergraduate programs. Students apply to one UC campus for a nonrefundable application fee; an additional fee is charged for each additional campus.

WHEN TO APPLY

All majors and programs in the College of Letters and Science, School of the Arts and Architecture, School of Theater, Film, and Television, School of Nursing, and Henry Samueli School of Engineering and Applied Science are open for Fall Quarter. The application filing period is November 1-30 of the prior year. See http://www.admissions.ucla.edu/prospect/applying.htm for up-to-date information on application procedures.

NOTIFICATION OF ADMISSION

The UC Undergraduate Application Processing Service e-mails notices to acknowledge receipt of applications. Subsequently, UCLA UARS 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 nine 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 http://www.admissions.ucla.edu.

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 requirement, the scholarship requirement, and the examination requirement.

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, cul-

Undergraduate Study

The Office of Undergraduate Admissions and Relations with Schools (UARS) invites prospective students to visit UCLA for individual or group tours of the campus. Reservations are required. See http://www.admissions.ucla.edu/tours.htm or call (310) 825-8764 or 206-3719.
To be competitive, applicants need to present an academic profile much stronger than that represented by the minimum admission requirements.

To be considered for admission as a freshman, students must meet three main requirements: the subject requirement, the scholastic requirement, and the examination requirement.

Subject Requirement

<table>
<thead>
<tr>
<th>Subject Requirement</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. History/Social Science</td>
<td>2 years</td>
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<tr>
<td>b. English</td>
<td>4 years</td>
</tr>
<tr>
<td>c. Mathematics</td>
<td>3 years</td>
</tr>
<tr>
<td>d. Laboratory Science</td>
<td>2 years</td>
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<tr>
<td>e. Language Other than English</td>
<td>2 years</td>
</tr>
<tr>
<td>f. Visual and Performing Arts</td>
<td>1 year</td>
</tr>
<tr>
<td>g. College Preparatory Electives</td>
<td>1 year</td>
</tr>
</tbody>
</table>

Scholarship 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 Assessment plus Writing Test score or the SAT Reasoning Test score.

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 review 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 review 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 http://www.admissions.ucla.edu/prospect/Adm_Fr.htm for the most complete and up-to-date information.

ADMISSION AS A TRANSFER STUDENT

Students are considered transfer applicants if they have been a registered student (1) at another college or university or (2) 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 comprehensive review, 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 guidelines in the application. See http://www.admissions.ucla.edu/prospect/Adm_tr/tradms.htm.

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 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 UARS. 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 Tests given by the College Board and the International Baccalaureate higher-level examinations. See http://www.admissions.ucla.edu/trcredit.htm.

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, in order to demonstrate sufficient command of English. If held for the ESL requirement, students must complete the requirement by taking the designated ESL 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. Make arrangements for this test by contacting TOEFL/TSE Publications, P.O. Box 6151, Princeton, NJ 08541-6151, (609) 771-7100 or at http://www.ets.org. Have the test results sent directly to the UCLA Office of Undergraduate Admissions and Relations with Schools.

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 URSA.
2. Enrollment in classes is completed via URSA at http://www.ursa.ucla.edu.

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 in the Schedule of Classes at http://www.registrar.ucla.edu/schedule/.

E-BILL
BruinBill accounts are administered electronically (e-bill) through URSA. Financial activity is displayed for the current term, as well as account activity for the last 24 months. URSA 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 or MasterCard, Discover Card, or American Express credit cards. UCLA converts checks into electronic payments. Those who wish to opt out of this process should send an e-mail to Student Financial Services at askfs@finance.ucla.edu.

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 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 the Appendix.

Fees are subject to change without notice by The Regents. See http://www.registrar.ucla.edu/fees/ for updates. 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.

**Course Materials Fees**

The College of Letters and Science and each school are authorized to assess course materials fees. Some course materials 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 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 fee, which is billed through BruinBill, for the entire term.

For fee amounts and updates, see http://www.registrar.ucla.edu/fees/.

**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. A full list of miscellaneous fees is posted at http://www.registrar.ucla.edu/fees/miscfee.htm.

**Student Health Insurance**

All UCLA 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 medical/health insurance plan must be maintained during all registered terms.

Students may improve UCSVIP benefits by enrolling in UCSVIP Plus to add dental benefits. UCSVIP Plus requires either enrollment for the academic policy year or when students are first eligible. See http://www.studenthealth.ucla.edu, click on the SHIP Insurance Info tab, and then select Purchase Dental Insurance (UCSHIP Plus). This must be submitted by the fee payment deadline.

The UCSVIP fee is billed each term along with other UCLA fees. UCSVIP fulfills all of the requirements mandated for a qualified medical/health insurance plan as defined by the University. The Ashe Student Health and Wellness Center is the primary healthcare provider for UCSVIP and is where all nonemergency medical care must be initiated for UCSVIP claim payment consideration. See http://www.studenthealth.ucla.edu.

<table>
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<tr>
<th>Estimated Annual Fees for 2011-12</th>
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<tr>
<td><strong>Tuition</strong></td>
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<tr>
<td><strong>Student Services Fee</strong></td>
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<td><strong>Green Initiative Fee</strong></td>
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<td><strong>PLEDGE Fee</strong></td>
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<td><strong>Ackerman Student Union Fee</strong></td>
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<td><strong>Ackerman/Kerckhoff Seismic Fee</strong></td>
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<td><strong>Wooden Recreation Center Fee</strong></td>
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<tr>
<td><strong>Student Programs, Activities, and Resources Center Fee</strong></td>
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<tr>
<td><strong>Student Health Insurance (UCSHIP)</strong></td>
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<tr>
<td><strong>Total for California residents</strong></td>
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<tr>
<td><strong>Nonresident Supplemental Tuition</strong></td>
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<td><strong>Total for nonresidents</strong></td>
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**Waiving UCSVIP**

Students may waive UCSVIP if they (1) maintain active enrollment in a qualified medical/health insurance plan that meets all established requirements, (2) apply for a UCSVIP waiver within established deadlines, and (3) correctly complete the online UCSVIP waiver form.

Students must apply for a UCSVIP waiver online. See the Ashe Center website for details, including a definition of a qualified private medical/health insurance plan. Click on the SHIP Insurance Info tab on http://www.studenthealth.ucla.edu and select Waive Student Health Insurance Plan (UCSHIP).

**Deadlines for Waiving UCSVIP**

Third-party individuals may not waive UCSVIP for a student. Waivers must be submitted by the stated deadlines whether or not fees have been paid by that date. If the 20th falls on a weekend or holiday, the due date is the last business day prior to the 20th. Deadlines are strictly enforced. There are no refunds after the deadline.

The schedule for waiving UCSVIP is as follows:

- **Fall Quarter**: September 1-20
- **Winter Quarter**: December 1-20
- **Spring Quarter**: March 1-20

The above information serves as official notice of the UCLA mandatory medical/health insurance requirement. All students are responsible for providing complete and accurate information that must be submitted by the stated deadlines.

**Hepatitis B Vaccination Requirement**

California law requires students 18 years and younger to provide proof of immunity to Hepatitis B prior to entering and enrolling at the University of California. The Hepatitis B vaccine is a three-shot series. If students have already received the series in their lifetime, there is no need to repeat it. To satisfy the requirement,
all students must submit their information at http://www.studenthealth.ucla.edu. The link is located under the New Bruins section.

Students who have not yet completed the series are granted a two-term grace period to comply. Failure to satisfy the requirement by the third term results in a hold on student records, whereby students cannot enroll in classes or use any University services.

**FEE REFUNDS**

Students who formally withdraw from the University may receive partial refunds of fees. For information on withdrawal, see the Academic Policies section of this catalog. Consult the Schedule of Classes for exact refund amounts and dates.

**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 approved for enrollment in 10 units or less by the dean of their program—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.

File a Request for Fee Reduction 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 Request for Fee Reduction 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 choose 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 insure that they enroll in an effective program.

The Schedule of Classes (http://www.registrar.ucla.edu/schedule/) contains listings of class times, meeting rooms, instructors, and all information necessary for enrolling in classes. Use the Schedule and academic counseling to assemble a program of courses.

**URSA ENROLLMENT**

Students enroll in classes through University Records System Access (URSA), which is accessed at http://www.ursa.ucla.edu. The site walks students through the enrollment procedure.

Students are assigned specific times—called appointments—when they are allowed to enroll. Use URSA to determine enrollment appointments.

Also use URSA for other enrollment-related tasks, such as adding, dropping, or exchanging classes, joining the wait list for a class and checking waitlist status, or changing the grading basis for a class. For more information, see the URSA and Enrollment sections of the Schedule of Classes at http://www.registrar.ucla.edu/schedule/.

**IN-PERSON ENROLLMENT**

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

**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 URSA after each enrollment transaction.

Students are responsible for all courses and the grading basis as listed on URSA 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 via URSA. Some changes require an Enrollment Petition along with approval signatures.

See Enrollment in the Schedule of Classes 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.

**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**

At the discretion of the appropriate campus authorities on both campuses, California Education Code sections 66755 and 66756 (amended by California Senate Bill 361 passed in 1999) allow undergraduate students enrolled in any campus of the California community colleges, the California State University, or the University of California to enroll without formal admission in a maximum of one course per academic term at a campus of either of the other systems on a space-available basis. 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 residence 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. UCLA students obtain applications from the Registrar's Office, 1113 Murphy Hall. 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; students in Arts and Architecture should contact the Student Services Office in 2200 Broad Art Center; 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, Theater, Film, and Television, Engineering and Applied Science, and Nursing students, their respective Student Affairs Office. The application is also available at http://www.registrar.ucla.edu/forms/simulenroll.pdf.

**Financial Support**

Financial Aid Office
A129J Murphy Hall
(310) 206-0400
http://www.fao.ucla.edu

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 Sessions 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 at http://www.fao.ucla.edu.

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 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 FAFSA. Students should complete the FAFSA at http://www.fafsa.gov by March 2. Be sure to indicate that the data is to be sent to UCLA by using the UCLA Title IV code: 001315.

PROSPECTIVE STUDENTS
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 STUDENTS
Continuing students may access their FAFSA renewal applications at http://www.fafsa.gov beginning in January and should complete them by March 2 for on-time consideration. International students can obtain their applications for aid from the Financial Aid Office beginning in January.

TYPES OF FINANCIAL AID
The four basic types of aid are scholarships, grants, loans, and work-study employment. The Financial Aid Office 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 FAFSA. Scholarships managed by the Financial Aid Office 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 name (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 $2,000 and are not renewable. Entering students apply for scholarships on the UC Application for Admission and Scholarships. Continuing students must apply using the Undergraduate Scholarship Application for Continuing Students at http://www.fao.ucla.edu. The application is available at the beginning of January and is due by March 2.

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 receive a combination of grants and scholarships to cover the amount of their need. Regents Scholars also receive special privileges.

UCLA ALUMNI SCHOLARSHIPS
Alumni Scholarships are available to California high school graduates who will be UCLA freshmen in the fall quarter. Additional scholarships are available to community college transfer students with a 3.75 GPA. Students should have demonstrated leadership ability, be involved in extracurricular activities, and have academic excellence and promise. Alumni Scholarships are merit based and competitively awarded. Freshman award amounts range from $4,000 to $17,500 and are paid over four years; transfer awards are $4,000 each and are paid over two years. Annual renewals require a combination of 30 hours of service annually to UCLA and the Alumni Association.

The Dr. Ralph J. Bunche Freshman Alumni Scholarships, also presented by the UCLA Alumni Association and named in honor of the Nobel Peace Prize laureate and UCLA alumnus, are given to students from historically underrepresented backgrounds to encourage students who add to the diversity of the UCLA campus community. Award amounts range from $4,000 to $17,500. Awards are paid over four years; annual renewals require a combination of 30 hours of service annually to UCLA and the Alumni Association.

In addition to the monetary awards, Alumni Scholars receive special privileges, including membership in the Alumni Scholars Club, a student organization dedicated to leadership development and service. Recipients who receive work study or loans as part of a financial aid package receive additional alumni grant monies the first year. Alumni Scholars are eligible to receive additional grant monies in their second, third, and fourth years up to $5,000.

Applicants need not be related to UCLA alumni to apply. The UCLA Alumni Association administers these programs. For more information and applications, see http://alumni.ucla.edu/scholarships/.
ROTC Scholarships

ROTC Scholarships are awarded on a competitive basis to U.S. citizens regardless of parents' income. Scholarships provide tuition, a book allowance, fees, and a tax-free monetary allowance between $250 and $500 per month during the academic year. Applications for scholarships may be obtained by calling—Army, (310) 825-7381; Air Force, (310) 825-1742; Navy/Marine Corps, (310) 825-9075—or by writing to Armed Forces Opportunities, P.O. Box 2865, Huntington Station, NY 11746-2102. When writing, specify if the scholarship is desired for Army, Air Force, or Navy/Marine Corps. Applications for Army scholarships can also be obtained at https://www.nrotc.navy.mil or by calling (800) 628-7682. Completed applications for four-year scholarships should be submitted prior to August 15 (Navy/Marine Corps) for early consideration, but no later than December 1 (Air Force and Navy/Marine Corps) or by February 1 (Army) of the year preceding college matriculation. Two- and three-year scholarship applications are also available and considered when received. Four-year Navy scholarships are available for the nursing program.

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 2011-12 range from $555 to $5,550 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.

Cal Grants A and B

California residents who attend at least half-time are eligible to apply for a California Student Aid Commission Cal Grant award. The FAFSA and GPA Verification Form are the official applications for these programs. Cal Grant A awards assist low- and middle-income students with tuition and fee costs. They are based on need and grade-point average. Cal Grant B awards are intended to assist low-income and disadvantaged students with living expenses, books, supplies, and transportation costs. First-year awards may also cover registration fee costs. Renewal award recipients receive registration fee assistance. New awards are limited to students who have completed no more than one full-time semester or two full-time quarters or 16 semester units of part-time study or the equivalent.

University Grants

University grants provide eligible on-time applicants with financial assistance from state funds. Awards range from $100 to over $15,000 and are based on student need. All undergraduate students who are U.S. citizens or eligible noncitizens and who apply on time are considered.

Federal Supplemental Educational Opportunity Grants

Federal Supplemental Educational Opportunity Grants (FSEOG) are awarded to undergraduate students with financial need. Awards range from $100 to $800. Recipients must be U.S. citizens or eligible noncitizens. Preference is given to Pell Grant and Cal Grant recipients. Only on-time, grant-eligible students are considered.

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 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 http://www.loans.ucla.edu before funds are released.

All loan recipients must complete an exit interview with the Student Loan Services Office (A227 Murphy Hall, 310-825-9864, http://www.loans.ucla.edu) 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 Student 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. 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 Department of Education. Loans are available to undergraduate, graduate,
 AUDIOVISUAL DEGREES

Students may choose from over 128 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, Samueli School of Engineering and Applied Science, 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 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.
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 College or school and the department. To change majors, obtain a Petition for Change of Major at the department office.

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 three types of requirements for a degree:

1. University requirements
2. College or school requirements
3. 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 Tests in English OR
2. Scoring 5, 6, or 7 on the International Baccalaureate High Level English A Examination or scoring 6 or 7 on the International Baccalaureate Standard Level English A Examination OR
3. Scoring 680 or higher on the SAT II Subject Test in Writing (last offered in January 2005) or on the SAT Reasoning Test Writing Section OR
4. Scoring 30 or higher on the ACT Combined English/Writing test OR
5. Presenting transfer credit for an acceptable college-level course in English composition (passed with a grade of C or better) at another institution OR
6. 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 English Composition A, 2, or 2I (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 further information, see http://www.ucop.edu/elwr/index.html.

ENGLISH AS A SECOND LANGUAGE

All entering UCLA 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 the Analytical Writing Placement Examination (AWPE) or the English as a Second Language Placement Examination (ESLPE). 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. Undergraduate students may take the AWPE or ESLPE once only. Unauthorized retakes of the examinations result in an invalid examination score.

First-year undergraduate students do not need to take the ESLPE. 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, in order to demonstrate sufficient command of English. If held for the ESL requirement, students must complete the requirement by taking the designated ESL courses.

Transfer students who have completed the English Composition 3 and English 4W equivalent courses at their transfer institution may nonetheless be held for the UCLA ESL requirement at the discretion of Undergraduate Admissions and Relations with Schools (UARS). This includes but is not limited to all students who received a grade below B in either of these equivalent courses. Any transfer student held by UARS 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 courses in the English as a Second Language series to satisfy the ESL requirement.
Results of the ESLPE are used to determine placement into the required sequence of ESL courses or exemption from the ESL requirement. In the case of a non-passing score on the examination, students are placed in one or more of the credit-bearing courses—English as a Second Language 33B, 33C, and 35. 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. Certain ESL courses provide upper division elective units.

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, M183
   - Economics 183
   - Geography 136
   - 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
3. Presenting a satisfactory result of the requirement, by examination, as administered at another college or university within the state OR
4. Scoring 500 or better on the SAT Subject Test in U.S. History OR
5. 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 6248 Bunche Hall, (310) 825-3720.

COLLEGE OR SCHOOL REQUIREMENTS

The College and each school with undergraduate programs establish their own degree requirements. These generally include a (1) unit requirement that defines the total number of units to be completed, (2) scholarship requirement that defines a minimum grade-point average, (3) residence requirement that defines the amount of study that must be undertaken in residence at the UCLA campus, and (4) 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 section 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 (1) preparation for the major, which are lower division courses designed to prepare students for advanced study and (2) the major, which are upper division course requirements. Requirements for each department are listed in the Curricula and Courses section of this catalog.

DEGREE POLICIES

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

UNDERGRADUATE RESEARCH

UNDERGRADUATE RESEARCH CENTERS

The Undergraduate Research Centers (URC) assist students in the arts, humanities, and social sciences (A334 Murphy Hall, 310-825-2935, http://www.ugeduc.ucla.edu/urhass/) and in science, engineering, and mathematics (2121 Life Sciences, 310-794-4227, http://www.ugeducation.ucla.edu/urc-care/) by supporting scholarly, critical, and creative research. The centers provide mentoring and tutorials, manage the Student Research Program (SRP), and administer research stipends and scholarships. They also sponsor three student-run publications—the Undergraduate Science Journal, Aleph humanities and social sciences journal, and Westwind literary 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 http://www.ugresearch.ucla.edu.

**CENTER FOR ACADEMIC AND RESEARCH EXCELLENCE**

The Center for Academic and Research Excellence (CARE) provides enrichment opportunities for students majoring in the sciences, engineering, and mathematics who seek careers in scientific research and teaching and whose success through graduate training will increase the numbers of historically underrepresented individuals in academic and technological fields. CARE offers a variety of research opportunities during the academic year and summer that provides students the financial support to dedicate themselves to research. CARE programs, many sponsored by grants through federal agencies such as the National Institutes of Health (NIH) and the National Science Foundation (NSF), are for UCLA students as well as students from other universities. Offices are in 2121 Life Sciences. See http://www.ugeducation.ucla.edu/urc-care/.

**STUDENT RESEARCH PROGRAM**

Administered by each Undergraduate Research Center, the Student Research Program 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 http://www.ugeducation.ucla.edu/urc-care/srp.htm. Arts, humanities, social sciences, and behavioral sciences students should see http://www.ugeducation.ucla.edu/urhass/studentresearch.htm.

**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 http://www.ugeducation.ucla.edu/urc-care/scholars.htm. Arts, humanities, social sciences, and behavioral sciences students should see http://www.ugeducation.ucla.edu/urhass/scholarships.htm.

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**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.

**INTERNSHIPS 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 provide students with insights into a range of professional fields and the chance to apply academic theories firsthand.

**INTERNSHIPS AND INTERNATIONAL OPPORTUNITIES**

Internships and International Opportunities (IIO), a service of the UCLA Career Center, offer advice and leads for work-learn experiences in the U.S. and abroad. IIO is located in the Career Lab on the second floor of the Strathmore Building, (310) 206-1915, and features an extensive library of resources. See http://career.ucla.edu/internships/.
CAPSTONE MAJORS

Capstone majors provide students with the opportunity to demonstrate mastery and integration of knowledge and learned abilities in an active context within a discipline. Capstones engage a student’s individual creativity, research abilities, artistic or critical proficiency, personal reflection, and/or capacity for teamwork. 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. Capstone majors are designed to be the culmination of a UCLA undergraduate experience. So far, 35 majors have revised their curricula and have been designated capstone majors. Capstone majors are identified in the Curricula and Courses section of this catalog.

Aerospace Engineering B.S.
Art B.A.
Bioengineering B.S.
Chemical Engineering B.S.
Civil Engineering B.S.
Classical Civilization B.A.
Computational and Systems Biology B.S.
Computer Science B.S.
Computer Science and Engineering B.S.
Ecology, Behavior, and Evolution B.S.
Electrical Engineering B.S.
Environmental Science B.S.
Ethnomusicology B.A.
European Studies B.A.
Film and Television B.A.
Geology B.S.
Geology/Engineering Geology B.S.
Global Studies B.A.
Greek B.A.
Greek and Latin B.A.
History B.A.
Individual Field of Concentration B.A.
Individual Field of Concentration B.S.
Latin B.A.
Marine Biology B.S.
Materials Engineering B.S.
Mathematics/Atmospheric and Oceanic Sciences B.S.
Mechanical Engineering B.S.
Music B.A.
Music History B.A.
Neuroscience B.S.
Nursing (Prelicensure) B.S.
Spanish and Community and Culture B.A.
Statistics B.S.
Theater B.A.
WASHINGTON, DC INTERNSHIP PROGRAM

The Washington, DC, program allows students to complete 10-week summer internships in the nation’s capital. Internships are available with elected officials, government agencies, public interest groups, international organizations, the media, and a wide range of public and private enterprises. Internship search and application support is available. For further information, send e-mail to dcinterns@career.ucla.edu.

INTERNATIONAL OPPORTUNITIES

IIO advises students on international fellowships, internships, volunteer programs, short-term work, and teaching assignments outside the U.S.

INTERNSHIP AND FELLOWSHIP SUPPORT

Career Center counselors and peer advisers offer ideas and advice on internship and fellowship programs. Résumé reviews, personal statement critiques, and search tips are just a few of the services available by appointment, including same-day appointments.

QUARTER IN WASHINGTON, DC

The Center for American Politics and Public Policy (CAPPP) selects undergraduates each fall, winter, and spring to participate in its Quarter in Washington Program. The program offers an exciting opportunity to combine UCLA 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 are registered as UCLA students and earn UC credit in multiple majors (by petition) for all classes taken. The core course, a research development seminar, is multiple-listed in political science, sociology, and history, meets the capstone requirement for the Public Affairs minor, applies toward the Civic Engagement minor, and is eligible for College Honors consideration. 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 Institute, CNN, the Department of Justice, the Kennedy Center, Studio Theatre, the Center for Strategic and International Studies, and various members of Congress. For information, contact the CAPPP office by e-mail at info@cappp.ucla.edu or call (310) 206-3109. See http://www.cappp.ucla.edu/quarterinwashington/.

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 provided. The programs provide 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 section 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 provides 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 http://www.gseis.ucla.edu/edminor/ and the program description in the Curricula and Courses section of this catalog.

MATHEMATICS/EDUCATION PROGRAM

The Mathematics/Education Program, 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 Mathematics Student Services, 6356 Math Sciences. See http://www.curtiscenter.math.ucla.edu/undergraduate.html.
SCIENCE TEACHER EDUCATION PROGRAM
The Science Teacher Education Program (STEP), cosponsored by the College 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 education the following academic year. For details, e-mail Dr. Arlene Russell at russell@chem.ucla.edu or contact any science department undergraduate counseling office. See http://www.college.ucla.edu/cateach/.

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 provides clinical classroom experience and has students employed as full-time teachers in their second year. See http://centerx.gseis.ucla.edu/teacher-education/.

TEACHLA AND TEACHCOMPTON
TeachLA and TeachCompton are University Internship Programs associated with GSE&IS. University interns are full-time employees of Los Angeles Unified School District or Compton Unified School District and engage in five terms of credential coursework and fieldwork. On successful completion, interns receive a preliminary multiple or single subject credential. The program is a collaboration between GSE&IS, Los Angeles Unified School District, Compton Unified School District, United Teachers Los Angeles, and UCLA Extension. See http://centerx.gseis.ucla.edu/teacher-education/pathways/teachla-teachcompton/.

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 30 hours of observation, participation, and assisting in K-12 schools, and seminars to support those field experiences. See http://www.college.ucla.edu/cateach/ or call (310) 794-2191.

VISUAL AND PERFORMING ARTS EDUCATION MINOR
The Visual and Performing Arts Education minor in the School of the Arts and Architecture provides a sequence of courses designed to introduce students to the key issues and methodologies in the field of arts education and to a broad range of possible careers in the arts, including K-12 teachers, museum educators, arts administrators, teaching artists, and arts advocates. The arts education teaching sequence, an important component of the minor, consists of a series of three courses in which selected undergraduate students explore core issues in arts education, creativity, and social justice and then 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 supervision of their guiding teacher. The program office is in 2101 Broad Art Center. See http://www.arts.ucla.edu/vapae/ and the program description in the Curricula and Courses section 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 service scholarships, and two Astin Civic Engagement Scholarship programs. It is home to the undergraduate minor in Civic Engagement, the only one of its kind among research universities. The office is in A265 Murphy Hall, (310) 825-7867. See http://www.communitylearning.ucla.edu.

UNIVERSITY OF CALIFORNIA CENTER SACRAMENTO
The University of California Center Sacramento (UCCS) is operated by UC Davis and cosponsored by the UC Office of the President. The center’s long-term goal is to bring together UC faculty members with undergraduate and graduate students to pursue research related to state government, politics, and public policy. During Fall, Winter, and Spring Quarters, the residential program offers students an opportunity to participate in an intensive internship course and enroll in a research seminar that investigates policy issues related to the internship. A political journalism program is available during the summer. UCCS is open to all juniors and seniors with a 3.0 grade-point average. For more information, send e-mail to uccs@college.ucla.edu. See http://uccs.ucdavis.edu.

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
STUDY UNDERGRADUATE 46

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. See http://www.honors.ucla.edu/hchome.html.

Fiat Lux Freshman Seminar Program
Fiat Lux seminars provide students with an opportunity to share ideas in class—an important academic skill that can be acquired only through practice. These 1-unit seminars, taught by distinguished faculty members from across UCLA, introduce freshmen 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 at http://www.registrar.ucla.edu/schedule/. For more information, see http://www.fiatlux.ucla.edu.

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’s 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.

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.

During the academic year, additional programs are offered to provide academic advising and successful transition to the second year. For more information, contact the New Student and Transition Programs office in 201 Covel Commons, (310) 206-6685. See http://www.newstudents.ucla.edu.

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. See the Schedule of Classes for a listing of counselors and advisers.

Ask Peer Counselors
The Ask Peer Counseling Program is an extension of College Academic Counseling. Ask peer counselors are undergraduate students from the College of Letters and Science trained to respond to student questions and concerns in several convenient settings. No appointments are required, just walk up and Ask. Peer counselors make referrals and provide information about academic rules and regulations, deadlines, and petitions and, as peers, can provide valuable personal experience.

Students can find Ask peer counselors weekdays when school is in session at various locations across campus. For details about locations and operating hours, see http://www.college.ucla.edu/ask/. Students may also e-mail questions to ask@college.ucla.edu.

College Academic Mentors
Letters and Science college academic mentors (CAMs) are graduate students who mentor primarily undergraduate lower division students to successfully navigate a large research university. In addition to addressing issues related to academic success, CAMs provide information and referrals to campus resources that focus on undergraduate achievement. Many CAMs have served as teaching assistants and can give unique perspectives on faculty members, course selection, major requirements, and preparation for and application to graduate school. See http://www.ugedeation.ucla.edu/counseling/counselors/cams.htm.

For appointments, go to Window 1, A316 Murphy Hall. CAMs are also available in selected departments and through http://my.ucla.edu via the Virtual Counseling link.

Academic Advancement Program
The Academic Advancement Program (AAP), a multi-racial program, has a threefold mission: (1) to ensure the academic success, retention, and graduation of its students, (2) to increase the numbers of its students enter-
ing graduate and professional schools, and (3) to develop the academic, political, scientific, economic, and community leadership necessary to transform society in the twenty-first century. Programs are oriented toward furthering long-term academic and personal growth.

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 in 1230 Campbell Hall, (310) 206-1571. See http://www.aap.ucla.edu.

ACADEMIC COUNSELING
Counselors at AAP encourage students to explore their talents, believe in themselves, and aspire to academic and personal excellence. Counselors work with students to plan their academic programs, monitor progress toward the degree, provide information about degree requirements, and discuss graduate school and career options. See http://www.aap.ucla.edu/counseling/overview.html or call (310) 825-1481.

PEER COUNSELING
Peer counselors are upper division AAP students who assist entering students with the transition to the University and provide them with a perspective on life at UCLA. See http://www.aap.ucla.edu/counseling/peer_counselors.html or call (310) 825-1481.

PEER LEARNING LABORATORIES
AAP peer learning services promote academic excellence. Most peer learning facilitators are upper division AAP students who provide the intellectual challenge, encouragement, and personal support that students need to recognize their own authority as thinkers and learners. Most facilitating is done in small groups that foster discussion and allow students to listen to and articulate new and different perspectives. See http://www.aap.ucla.edu/tutoring/peer_learning.html or call (310) 206-7771.

CENTER FOR COMMUNITY COLLEGE PARTNERSHIPS
The Center for Community College Partnerships (CCCP) develops academic partnerships between California community colleges and the University to strengthen and diversify curriculum, create strong academic support programs, improve student competitiveness for UC admissions, and increase the diversity of the UCLA transfer admit pool. The CCCP Scholars Program offers peer mentoring and several summer programs to help prepare students for transfer to a four-year university. See http://www.cccp.ucla.edu or call (310) 267-4441.

MENTORING AND RESEARCH PROGRAMS
AAP offers several programs aimed at helping students achieve academic and professional goals.

Community Development and Social Justice Program
The Community Development and Social Justice (CDSJ) Program assists undergraduate students interested in graduate and professional schools. The program works in the fields of public health, public policy, social welfare, and urban planning to increase enrollment of AAP students committed to working toward social equity. Students work as interns, under the supervision of a professional staff member, at a community-based organization. See http://www.aap.ucla.edu/mentoring/cdsj.html or call (310) 794-4186.

Educators for Tomorrow Scholars Program
The Educators for Tomorrow (EFT) Scholars Program aims to advance a new generation of socially conscious leaders interested in careers in education. It provides AAP students with opportunities to meet faculty members and students in the Graduate School of Education and Information Studies to get involved in community service programs, internships, and service learning courses. Students in the program work with teachers at local public schools as volunteers and participate in educational roundtables. See http://www.aap.ucla.edu/mentoring/eft.html or call (310) 794-4186.

Graduate Mentoring and Research Program
The Graduate Mentoring and Research Program offers all AAP students the opportunity to obtain valuable research-oriented academic preparation in virtually any academic major, including social sciences, arts, and humanities. The program encourages students to pursue Ph.D. degrees, medical degrees, law degrees, and other advanced degrees by providing them research experience under the guidance of graduate mentors. See http://www.aap.ucla.edu/mentoring/overview.html or call (310) 794-4186.

Junior Scholars Program
The Junior Scholars Program gives first- and second-year AAP undergraduate students the opportunity to develop entry-level research projects in the humanities and social sciences. Over two academic terms, students meet regularly with graduate mentors and a faculty member. See http://www.aap.ucla.edu/mentoring/junior_scholars.html or call (310) 794-4186.
McNair Research Scholars Program

The McNair Research Scholars Program prepares undergraduate students for the best graduate programs in the country and to excel on the way to earning a Ph.D. in the humanities or social sciences. The program maintains a cohort of 26 students annually from those populations most severely underrepresented in graduate programs and the professoriate in 11 targeted departments in the humanities, social sciences, and behavioral sciences. See http://www.aap.ucla.edu/mentoring/mcnair.html or call (310) 794-4186.

SCHOLARSHIPS

There are many opportunities for eligible students in AAP to receive both merit and/or need-based scholarship funds. Some awards require application; others are available through nomination. Call (310) 206-1805 for further information.

Summer Programs

AAP’s six-week intensive academic residential summer program for incoming freshman and transfer students prepares historically underrepresented, low-income, and first-generation college-going students with the academic rigors and demands of a research university. Students are able to build a network of academic resources and friends prior to the regular school year that provides interaction with students from diverse backgrounds and broadens life experiences.

Students enroll in two or three University courses that meet UCLA requirements for graduation and receive support in small groups or individual sessions from teaching assistants and peer learning facilitators. Freshmen have the option of taking classes offered in the writing or mathematics/science intensive programs. Transfer student preparation involves the social and life sciences. Academic counselors are available to assist students in shaping their educational plan toward graduation. See http://www.aap.ucla.edu/new_students/ftsp.html or call (310) 206-1571.

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, 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 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 section of this catalog. See the Schedule of Classes 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 their department for its requirements.

DEPARTMENTAL SCHOLAR PROGRAM

Departments in the College of Letters and Science and each school, except the School of Nursing, 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 during the freshman year. To be eligible students must have a 3.5 grade-point average with 12 graded University of California units in the first term of their freshman year, or a cumulative 3.5 GPA at the end of the second and/or third terms. 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, 1206 Murphy Hall, (310) 825-3871. See http://www.aldpes.ucla.edu.

GOLDEN KEY

Golden Key is an international interdisciplinary academic honors organization dedicated to excellence. Students qualify on the basis of objective academic criteria. No more than the top 15 percent of enrolled sophomores, juniors, and seniors may be eligible.

The society recognizes and encourages scholastic achievement and excellence in all undergraduate fields of study. It unites with collegiate faculties and adminis-
trators in developing and maintaining high standards of education, provides economic assistance to outstanding members by means of an annual scholarship for initiates and graduating seniors, and promotes scholastic achievement and altruistic conduct through voluntary service. Invitations are issued in Fall Quarter, and a reception is held in Winter Quarter. For further information, contact the Office of the Dean of Students, 1206 Murphy Hall, (310) 825-3871. See http://www.goldenkeybruins.org.

**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 at http://www.mortarboardatucla.org/apply.html early in Winter Quarter and are due by mid-February. Approximately 40 members are selected each spring by the outgoing chapter. See http://www.mortarboardatucla.org or call (310) 206-5523.

**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 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 May, with the initiation 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. 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 mail. For further information, contact Phi Beta Kappa in the Honors Programs Office, A311 Murphy Hall, (310) 206-9667. See http://www.college.ucla.edu/pbk/.
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 the classrooms, the laboratories, the 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 doctoral degree (Ph.D., Ed.D., and so forth) is designed to prepare students for creative activity and original research, often in association with college or university teaching.

GRADUATE ADMISSION
Graduate Admissions/Student and Academic Affairs
1255 Murphy Hall
(310) 825-1711
http://www.gdnet.ucla.edu

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’s 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 at http://www.gdnet.ucla.edu/gasaa/deptinfo/deptinfointro.asp.

APPLYING FOR ADMISSION
Prospective students may apply online at http://www.gdnet.ucla.edu.

WHEN TO APPLY
Most departments and schools have deadlines in November and December for the following Fall Quarter. Consult the Graduate Division website’s Admissions section for specific deadlines for each major. Some departments also accept applications for Winter and Spring Quarters.

At the discretion of the department, applications may be considered if received after a program’s stated deadline, provided the enrollment limits have not been exceeded.

APPLICATION FEE
A nonrefundable application fee is required when the application is submitted.

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 average 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 papers and materials to be submitted, including official transcripts of record and the nonrefundable application fee, are specified at http://www.gdnet.ucla.edu. Submitted materials are not returnable.

GRADUATE RECORD EXAMINATION
Applicants who apply 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.
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.

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 Institutes of Chartered Accountants, the Institute of Chartered Secretaries and Administrators, and so forth, also 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 in duplicate, for all college and university work. The original of an academic record must not be replaced; a properly certified copy should be sent instead. Specific information for applicants from a variety of educational systems is available at http://www.gdnet.ucla.edu.

Proficiency in English
International students who hold a bachelor’s or higher degree from a university in a country where the official language is English and in which English is the spoken tongue and the medium of instruction are exempt from the Test of English as a Foreign Language (TOEFL) or the International English Language Testing System (IELTS) examination and the UCLA English as a Second Language Placement Examination (ESLPE). All other applicants must take the TOEFL, administered by the Educational Testing Service in some 95 foreign centers, or the IELTS, administered by IELTS test centers throughout the world. See http://www.ielts.org for the nearest test center. TOEFL applications are available from TOEFL Services, P.O. Box 6151, Princeton, NJ 08541-6151, (609) 771-7100, or at http://www.ets.org.

Students whose native language is not English are required to take the UCLA English as a Second Language Placement Examination (ESLPE), in addition to the TOEFL or IELTS examination, before or during the term in which they are to register. Failure to sit for the ESLPE results in a hold on student records. Those graduate students who believe that their initial ESLPE score is not reflective of their English language proficiency due to having recently arrived in the U.S. may sit for the examination a second time in the subsequent term only (retaking the examination in the same term is not counted as a valid result). In cases where students retake the examination in their second term of study, the most recent examination score is held to be valid. Unauthorized retakes of the examination result in an invalid examination score. Depending on the ESLPE results, students may be required to complete one or more courses in the English as a Second Language 33 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. Students should expect to spend a longer period of time at the University than would normally be necessary to complete a degree program if they are required to take any English as a second language courses. If they do not achieve a minimum score on the ESLPE, their admission is deferred until they have acquired the necessary proficiency in English. Neither the TOEFL, nor IELTS, nor any other English proficiency test can be submitted or accepted in lieu of the ESLPE.

Graduate students who plan to work as teaching assistants (TAs) and are nonnative English-speaking international students are required to take the Test of Oral Proficiency (TOP), which is administered by the Office of Instructional Development (OID). Students who do not plan to work as teaching assistants do not need to take the TOP.

For students receiving a clear pass (7.1 or above) on the TOP, no coursework is required. Students receiving a
UCLA offer a mechanism for a combined recruitment, tion and application procedures. 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 at http://www.oid.ucla.edu/top/ or call (310) 825-3106.

ADMISSION TO THE SCHOOLS OF DENTISTRY, LAW, AND MEDICINE

Applicants for M.S. and Ph.D. programs in departments of the School of Medicine or Dentistry should apply for admission to the Graduate Division as described above. For admission to D.D.S., J.D., LL.M., S.J.D., and M.D. degree programs in the Schools of Dentistry, Law, and Medicine, consult the websites or write to the respective schools for information and application procedures.

ADMISSION TO PROGRAMS IN MOLECULAR, CELLULAR, AND INTEGRATIVE LIFE SCIENCES

The life and basic biomedical sciences departments at UCLA offer a mechanism for a combined recruitment, admission, and first-year program that provides Ph.D. students in the molecular, cellular, and integrative life sciences with maximal choice and flexibility in selecting a research specialization. Through UCLA ACCESS to Programs in Molecular, Cellular, and Integrative Life Sciences, students are able to select research projects from faculty mentors according to their research specialization. Students who wish to carry out their research in the laboratory of an ACCESS faculty member in the Neurobiology department must submit an application to transfer into the Neuroscience interdepartmental program.

Transfer to the Degree-Granting Program

Students are admitted to UCLA graduate standing through UCLA ACCESS on a provisional basis for up to four terms. At the end of Spring Quarter, academic progress is evaluated by the steering committee. Students who receive a satisfactory evaluation select a faculty mentor as their doctoral committee chair. With concurrence of the mentor and the degree-granting program, students then transfer from UCLA ACCESS to that program for the remainder of their Ph.D. studies.

Students who wish to carry out their research in the laboratory of an ACCESS faculty member in the Neurobiology department must submit an application to transfer into the Neuroscience interdepartmental program.

In the event students are unable to identify a suitable mentor and program by the end of their first year, one
additional laboratory rotation approved by the steering committee is available during the Summer Quarter. Students who are unable to arrange for a laboratory after four rotations are recommended for release from their provisional graduate standing.

**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 admission 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 Concurrent and Articulated Degree Programs in the front of this catalog). 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 doctoral 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, 1147 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 are returning after an absence (except a formal leave of absence) must file an Application for Graduate Admission. See the Academic Policies section of this catalog for readmission procedures.

**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 URSA.

2. Enrollment in classes is completed via URSA at

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 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 (see below). Failure to register or be on an official leave of absence for any term constitutes withdrawal from UCLA.

**Paying Fees**

Details on fee payment, enrollment procedures, and deadlines are in the Schedule of Classes at http://www.registrar.ucla.edu/schedule/.

**E-BILL**

BruinBill accounts are administered electronically (e-bill) through URSA. Financial activity is displayed for the current term, as well as account activity for the last 24 months. URSA 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 or MasterCard, Discover, and American Express credit cards. UCLA converts checks into electronic payments. Those who wish to opt out of this process should send e-mail to Student Financial Services at askfs@finance.ucla.edu.

**Annual Graduate Fees**

Although the exact cost of attending UCLA varies by program, 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 to Graduate Admissions with the Statement of Intent to Register.
Students classified as nonresidents of California must pay annual nonresident supplemental tuition in addition to other registration fees. Legal residents of California are not required to pay nonresident supplemental tuition. For a definition of residence and nonresidence, see the Appendix.

Estimated Annual Fees for 2011-12

Fees are mandatory and subject to change without notice. See http://www.registrar.ucla.edu/fees/ for updates.

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<td>Student Health Insurance (UCSHIP)</td>
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Total for California residents: $13,549.89
Nonresident Supplemental Tuition: $15,102.00
Total for nonresidents: $28,651.89

Fees are subject to change without notice by the Regents. See http://www.registrar.ucla.edu/fees/ for updates.

Students in the Schools of Arts and Architecture, Dentistry, Law, Management M.B.A. program, Medicine, Nursing, Public Affairs, Public Health, and Theater, Film, and Television should refer to the Schedule of Classes for explanation of additional fees.

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. A full list of miscellaneous fees is at http://www.registrar.ucla.edu/fees/miscfee.htm.

STUDENT HEALTH INSURANCE

All UCLA graduate 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 medical/health insurance plan must be maintained during all registered terms.

The UCHSIP fee is billed each term along with other UCLA fees. UCHSIP fulfills all of the requirements mandated for a qualified medical/health insurance plan as defined by the University. The Ashe Student Health and Wellness Center is the primary healthcare provider for UCHSIP and is where all nonemergency medical care must be initiated for UCHSIP claim payment consideration. See http://www.studenthealth.ucla.edu.

Waiving UCHSIP

Students may waive UCHSIP if they (1) maintain active enrollment in a qualified medical/health insurance plan that meets all established requirements, (2) apply for a UCHSIP waiver within established deadlines, and (3) correctly complete the online UCHSIP waiver form.

Students must apply for a UCHSIP waiver online. See the Ashe Center website for details, including a definition of a qualified private medical/health insurance plan. Click the SHIP Insurance Info tab on http://www.studenthealth.ucla.edu and choose “Waive Student Health Insurance Plan (UCSHIP)” from the list of topics.

Deadlines for Waiving UCHSIP

Third-party individuals may not waive UCHSIP for a student. Waivers must be submitted by the stated deadline whether or not fees have been paid by that date. If the 20th falls on a weekend or holiday, the due date is the last business day prior to the 20th. Deadlines are strictly enforced. There are no refunds after the deadline.

The schedule for waiving UCHSIP is as follows:

School of Law Students
- Fall Semester: August 1-19
- Spring Semester: December 1-20

School of Medicine Students
- Fall Semester: Fourth year - June 1-20
- All other years - July 1-20
- Spring Semester: December 1-20

All Other Students
- Fall Quarter: September 1-20
- Winter Quarter: December 1-20
- Spring Quarter: March 1-20

The above information serves as official notice of the UCLA mandatory medical/health insurance requirement. All students are responsible for providing complete and accurate information that must be submitted by the stated deadlines.

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 section of this catalog or consult the Schedule of Classes 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. Students are responsible for paying fees by the deferred payment deadline, which is two months after the stan-
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 in the Schedule of Classes. Fees not paid by the deadline are subject to the late fee charge.

**Reduced Nonresident Supplemental Tuition**

The annual nonresident supplemental tuition 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 registration fees for the term in which they expect to complete final degree requirements and receive their degree. Doctoral students are not eligible to pay the filing fee unless registered the immediately preceding term.

Students who pay the filing fee are not eligible for University services beyond a maximum of 12 hours of faculty and staff time required to complete degree requirements and are not considered in the same status as registered students.

**In Absentia Registration**

Graduate students taking research or coursework leaves of absence 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 section of this catalog for more information.

**Annual Budget Estimates**


Budgets for the Schools of Medicine, Dentistry, and Nursing are higher due to specialized supplies; figures are available from the health professions counselor. Budgets are designed to serve as a guide and are subject to change without notice.

All fees are subject to change without notice by The Regents. See the Schedule of Classes fee charts for updates at http://www.registrar.ucla.edu/fees/.

**Enrolling in Classes**

The Schedule of Classes (http://www.registrar.ucla.edu/schedule/) contains listings of class times, meeting rooms, instructors, and all information necessary for enrolling in classes. Use the Schedule and academic counseling to assemble a program of courses.

**URSA Enrollment**

Students enroll in classes through University Records System Access (URSA), which is accessed at http://www.ursa.ucla.edu. The site walks students through the enrollment procedure.

Students are assigned specific times—called appointments—when they are allowed to enroll. Use URSA to determine enrollment appointments.

Also use URSA for other enrollment-related tasks, such as adding, dropping, or exchanging classes, signing onto the wait list for a class and checking waitlist status, or changing the grading basis for a class. For more information, see URSA in the Enrollment section of the Schedule of Classes at http://www.registrar.ucla.edu/schedule/.

**In-Person Enrollment**

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

**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 URSA after each enrollment transaction.

Students are responsible for all courses and the grading basis as listed on URSA 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 via URSA. Some changes require an Enrollment Petition along with approval signatures.

See Enrollment in the Schedule of Classes 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.

**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 the University’s 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 or withdraw. 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 Affairs coordinator, 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 (see above). Failure to register 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.

Students who were registered for the preceding term and who completed all requirements for a degree in the interval between terms (before the first day of instruction) are not required to register to receive a degree at the end of the following term.

HEALTH ASSESSMENT AND EVALUATION

New students enrolling in the School of Dentistry, Medicine, or Nursing or the Department of Social Welfare must complete and return to the Arthur Ashe Student Health and Wellness Center the Health Evaluation forms. Visit the Ashe Center website at http://www.studenthealth.ucla.edu to obtain professional school health clearances and monitor immunization compliance. To schedule a clearance appointment, call (310) 825-4073, option 1, or visit the Ashe Center website. For specific questions related to requirements, contact the individual department.

FINANCIAL SUPPORT

Fellowships and Financial Services Office
1228 Murphy Hall
(310) 825-1025
http://www.gdnet.ucla.edu

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 reentering) students is included in the online Application for Graduate Admission. Continuing graduate students should complete the online Fellowship Application for Continuing Graduate Students. Completed fellowship applications must be returned to the home department by the published deadlines. Some departments have earlier deadlines; consult the Graduate Division website at http://www.gdnet.ucla.edu for details.

Financial Support for Entering Graduate Students and Graduate Student Financial Support for Continuing Students describe the full range of financial assistance available. They are revised annually and made available at the Graduate Division’s website. 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, 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. (Teaching assistants, associates, and fellows are eligible to receive partial payment at the beginning of the term in the form of an interest-free advance loan check. Interested students should apply to their departments.) Graduate student researcher appointments give students experience working on faculty-supervised research projects.
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). The priority filing deadline is March 2.

Students who need financial aid for Summer Sessions must submit a Summer Aid Application in addition to FAFSA. Summer applications are available at http://www.fao.ucla.edu 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 cross-campus Summer Sessions. See http://www.fao.ucla.edu for applications and deadline information.

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. Further information is available from the Financial Aid Office, A129J Murphy Hall or at http://www.fao.ucla.edu.

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 Program Requirements for UCLA Graduate Degrees at http://www.gdnet.ucla.edu. At the same website, Standards and Procedures for Graduate Study at UCLA provides 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 doctoral 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 fieldwork. 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 degree. 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 at http://www.gdnet.ucla.edu and the departmental graduate adviser for details. Policies and regulations are outlined in Standards and Procedures for Graduate Study at UCLA, which is available from Graduate Admissions/Student and Academic Affairs, 1255 Murphy Hall or at http://www.gdnet.ucla.edu.

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 doctoral degree, the minimum residence requirement is two years (six 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 residency 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: (1) enroll in two six-week Summer Sessions taking at least 2 units of upper division and/or graduate work in each session OR (2) 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 further details on foreign language requirements, consult the departmental graduate adviser.

CHANGING MAJORS

Continuing graduate students may petition for a change of major after discussing plans with the new department. Forms are available from the departments and should be filed with Graduate Admissions/Student and Academic Affairs, 1255 Murphy Hall. Deadlines are generally the same as those for the graduate admissions procedure.

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 (20 units) of the nine 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 Comprehensive Examination. 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 Comprehensive Examination

Following advancement to candidacy, students under Plan II must pass a comprehensive examination. Information concerning this examination and its format (which may be a recital, exhibition, project portfolio, etc.) is available in the departments.

DOCTORAL 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 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 group. 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. All students are required to successfully complete a written qualifying examination and the University Oral Qualifying Examination before advancement to doctoral candidacy. Once all departmental and foreign language requirements are met, the department chair consults with the student and then nominates a doctoral committee.

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 doctoral 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 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 University 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 class levels are determined by the number of units completed as follows:

- Freshman (UFR) 0-44.9 units
- Sophomore (USO) 45-89.9 units
- Junior (UJR) 90-134.9 units
- Senior (USR) 135 or more units

Graduate class levels are based on the degree objective and whether or not students are advanced to candidacy for a doctorate.

**REPETITION OF COURSES**

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

1. To improve the grade-point average, 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. 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. 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 Passed/Not Passed grades, students may take these courses on a Passed/Not Passed 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 grade-point average in the major field, or must have senior standing. Students who have an outstanding Incomplete grade in an upper division tutorial course may not enroll in another upper division tutorial course until the grade of Incomplete 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 doctoral degrees.

Students need approval from the instructor, the department, and the College or school or the dean of the Graduate Division, from whom petitions for credit by examination (with fee) are available.

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

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, but a C grade must be offset by higher grades in the same term for students to remain in good academic standing. Courses in which a C grade is received, however, may be applied toward graduate degrees unless otherwise prohibited by the program requirements.

The Schools of Dentistry, Medicine, and Law use their own grading codes. Students who are interested in programs in any of these schools should consult the appropriate school announcement.

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

<table>
<thead>
<tr>
<th>Grade</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>A+</td>
<td>4.0</td>
</tr>
<tr>
<td>A</td>
<td>4.0</td>
</tr>
<tr>
<td>A–</td>
<td>3.7</td>
</tr>
<tr>
<td>B+</td>
<td>3.3</td>
</tr>
<tr>
<td>B</td>
<td>3.0</td>
</tr>
<tr>
<td>B–</td>
<td>2.7</td>
</tr>
<tr>
<td>C+</td>
<td>2.3</td>
</tr>
<tr>
<td>C</td>
<td>2.0</td>
</tr>
<tr>
<td>C–</td>
<td>1.7</td>
</tr>
<tr>
<td>D+</td>
<td>1.3</td>
</tr>
<tr>
<td>D</td>
<td>1.0</td>
</tr>
<tr>
<td>D–</td>
<td>0.7</td>
</tr>
<tr>
<td>F</td>
<td>0.0</td>
</tr>
<tr>
<td>NP</td>
<td>0.0</td>
</tr>
<tr>
<td>I</td>
<td>0.0</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 P or S grade 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 an I grade 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 and Letters and Science 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 them about their policies in this regard.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Points</th>
<th>Course</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><strong>Total</strong></td>
<td><strong>12</strong></td>
<td><strong>12</strong></td>
<td><strong>34.8</strong></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 an NP grade.

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; consult the College or school for details.

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

Courses that are offered only on a P/NP basis are designated PN in the Schedule of Classes.

**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 U grade. 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 via URSA.

Courses that are offered only on an S/U basis are designated SU in the Schedule of Classes.

**INCOMPLETE GRADES**

Once an Incomplete (I) grade is assigned, it remains on the transcript along with the passing grade students may later receive for the course. The instructor may assign the I grade 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 I grade as opposed to a nonpassing grade.

If an I grade is assigned, students may receive unit credit and grade points by satisfactorily completing the coursework as specified by the instructor. Students should not reenroll 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 grade lapses to an F, NP, or U as appropriate. The College or school may extend the deadline in unusual cases (not applicable to graduate students).

**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 school or College faculty or the Graduate Division determines credit if they do not complete the full sequence and petition for partial credit.

**DEFERRED REPORT GRADES**

Students may receive a Deferred Report (DR) grade 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 DR grade, 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 grade 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 reexamination or, with the exception of the I and IP grades, 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 the Appendix for further 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 Schedule of Classes. Students who do not register are subject to the following policies on absence and readmission.

CANCELLATION

Before the first day of classes, students may cancel registration by (1) mailing a written notice to Student Services, Attn: Cancellation Clerk, 1113 Murphy Hall, UCLA, Box 951429, Los Angeles, CA 90095-1429 or (2) faxing a written notice to (310) 206-4520. Refund is as follows: fees paid by new undergraduate students are refunded except for the nonrefundable acceptance of admission fee and service fee; fees paid by new M.B.A. and Dentistry students are refunded except for their respective nonrefundable acceptance of admission fee; for new graduate, continuing, and reentering 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 compete for readmission to return to the University.

WITHDRAWAL

Withdrawing from the University means discontinuing attendance in all courses in which students are enrolled. Students who withdraw during a term need to file a Notice of Withdrawal, available from their academic dean’s office (undergraduates) or departmental office (graduate students).

When students officially withdraw, a percentage of the Student Services Fee may be refunded depending on the date the withdrawal form is filed.

Claims for refund must be presented within the academic (fiscal) year to which the claim is applicable. Consult the Schedule of Classes for policy details and specific refund dates.

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, departmental, or College 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.

Students who register and subsequently discontinue coursework or stop payment on registration checks without an approved petition for withdrawal, leave of absence, or cancellation receive F, NP, or U grades, 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.

UNDERGRADUATE READMISSION

Students who complete a term (Fall, Winter, or Spring Quarter), and do not register the following term, may return to UCLA the subsequent term as a continuing student and be eligible to register and enroll in advance.

ONE-TERM ABSENCE

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, they must have an official transcript mailed from the institution directly to UCLA Undergraduate Admissions and Relations with Schools (UARS). Once students request a transcript, they must complete a Transfer Credit Evaluation Request form at UARS, 1147 Murphy Hall, 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 website at http://www.ieo.ucla.edu/nonucprograms/.

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

REENTERING STUDENTS

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.

**GRADUATE READMISSION**

For details on the policies below, consult Standards and Procedures for Graduate Study at UCLA at http://www.gdnet.ucla.edu/publications.asp.

**CONTINUOUS REGISTRATION POLICY**

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 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 the approval of the Graduate Division, be eligible for leaves of absence. Graduate students are allowed a maximum of six 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.

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.

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 Request for Leave of Absence form is available at http://www.gdnet.ucla.edu in the forms section. See the Schedule of Classes calendar for the filing deadline.

**In Absentia Registration**

Academic and professional graduate students taking leaves of absence outside California for research or coursework related to their degree program may be eligible for in absentia registration. Students registered in absentia pay 15 percent of the Educational and Student Services Fees, 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. For complete details and restrictions, see the FAQ at http://www.gdnet.ucla.edu/gss/library/abspetitionfaq.pdf. To register in absentia, complete a Petition for In Absentia Registration at http://www.gdnet.ucla.edu/gss/library/abspetition.pdf.

**APPLICATION FOR 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 compete for readmission with new applicants.

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 which is available online at http://www.gdnet.ucla.edu. Payment of the nonrefundable application fee may be paid 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 reflects all undergraduate and graduate work completed in UCLA regular session and Summer Sessions. It lists chronologically the courses, units, grades, cumulative GPA, transfer credits, and total units.

Official UCLA transcripts are printed on security paper to safeguard against unauthorized duplication, alteration, and misrepresentation. The paper has a multicolor 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.”

Two versions of official UCLA student records are available from the Registrar’s Office, 1113 Murphy Hall. These are the academic transcript and the verification transcript. Each is designed to meet specific needs.
ACADEMIC POLICIES

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 seven weeks after the end of the term. Students who require earlier proof of graduation should contact a degree auditor in 1113 Murphy Hall. A fee may be charged for this service.

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

VERIFICATION TRANSCRIPT

The verification transcript certifies registration (fee payment), enrollment status, and degrees. For auto insurance “good student” discount, insurance forms should be presented at 1113 Murphy Hall. The verification fee is required for this service. 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-listed units or list courses for a term. Verification of degree can be issued after students’ degrees have been posted to their student record approximately seven weeks after the term ends. The clearinghouse abides by all provisions of the Family Educational Rights and Privacy Act (FERPA). The clearinghouse abides by all provisions of the Family Educational Rights and Privacy Act (FERPA).

The fee for a verification transcript is waived if requested for loan or student aid verifications (proof of request required). Most enrollment verifications for loans and creditors, however, are processed for the University by the National Student Clearinghouse, 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). See http://www.studentclearinghouse.org.

THIRD-PARTY VERIFICATIONS

UCLA has authorized National Student Clearinghouse to act as its agent for all third-party verifications of student enrollment and degrees. Degree verification for the most recent term is available approximately seven weeks after the term ends. The clearinghouse abides by all provisions of the Family Educational Rights and Privacy Act (FERPA). See http://www.studentclearinghouse.org.

ORDERING TRANSCRIPTS

Continuing students must order academic and verification transcripts through URSA. Other students may order transcripts in person at 1113 Murphy Hall, or by sending a request to UCLA Registrar’s Office, Attn: [Academic or Verification] Transcripts, 1105 Murphy Hall, Box 951429, Los Angeles, CA 90095-1429.

Requests should include the student’s
1. Name under which he or she was registered at UCLA
2. Dates of attendance at UCLA
3. Date of birth
4. 9-digit student ID number, if available
5. Complete address and telephone number
6. Number of copies requested
7. Mailing instructions including all details and any special handling
8. Full signature

Transcript Order forms containing this information are available in the Murphy Hall northwest lobby or at http://www.registrar.ucla.edu/forms/.

For UCLA Extension courses, order transcripts from UCLA Extension, P.O. Box 24901, Department K, Los Angeles, CA 90024-0910.

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 contacting transcripts@registrar.ucla.edu.

FEES AND PAYMENT

Current students’ transcript fees are billed to their BruinBill account. Former students may be billed or may submit a check or money order payable to Regents-UC.

In some cases, special fees may apply. Forms that must be completed by the Registrar’s Office or that require official signatures are charged a special handling fee.
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 requisites, and fulfilling degree requirements are all part of their academic duties as students.

Minimum Scholarship

The grades A through C and Passed 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 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 the University under any of the following conditions:

1. If their grade-point average in any one term is less than 1.5 or
2. If they do not earn at least a C (2.0) average in any term when they are on probation or
3. If 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

Each school enforces minimum progress regulations. The College 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 section 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 carry a fee.

Some of the 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 URSA 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 in ASSIST (http://www.assist.org), the statewide transfer information site. 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 Undergraduate Admissions and Relations with Schools (UARS), 1147 Murphy Hall, Box 951436, Los Angeles, CA 90095-1436. Transfer students should discuss transfer credit with their College or school counselor and/or departmental adviser.

**Community College**

The maximum number of community college units allowed toward the bachelor's degree is 105 quarter units (70 semester units). The UCLA UARS does not grant transfer credit for community college courses beyond 105 quarter units, but students may still receive subject credit for this coursework to satisfy lower division requirements. Consult the College or school counselors for possible further limitations. 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 Henry Samueli School of Engineering and Applied Science 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 is different for the College and each school.

**College of Letters and Science**

The Degree Progress Report (DPR) serves as the degree check. The DPR is an assessment of all degree requirements and the courses taken to fulfill them. View and print DPRs through URSA or order one at a College counseling office (Academic Advancement Program, 1209 Campbell Hall; Honors Programs, A311 Murphy Hall; College Academic Counseling, A316 Murphy Hall). Students should review questions about their DPR with departmental undergraduate advisers or College counselors, as appropriate.

**School of the Arts and Architecture**

Degree Progress Reports are available through URSA as well as on request from the Student Services Office, 2200 Broad Art Center. Students should consult an adviser in the Student Services Office when they have questions about degree requirements. Questions regarding major requirements should be referred to the departmental counselor.

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

Students following a catalog year prior to 2006-07 and starting their upper division major field coursework must submit a "satisfied" Academic Program Proposal to the Office of Academic and Student Affairs, 6426 Boelter Hall. The Academic Program Planner (APP) is an interactive self-advising system that informs these students if their academic programs meet the requirements for graduation. Students following the 2006-07 and later catalogs use a program called Degree Audit Reporting Systems (DARS). Students should obtain an official degree check at least one term prior to their graduation term. For details, see http://www.seasoasa.ucla.edu/degree_check.html.

**School of Nursing**

Students may initiate a request for an updated degree check by contacting the student services coordinator in the Student Affairs Office, 2-137 Factor Building.

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

Students entering as freshmen receive a written degree check on achieving junior standing. Students entering as juniors receive a degree check on entry. Students may initiate or request an updated degree check by making an appointment with their departmental
counselor in the Student Services Office, 103 East Melnitz Building.

**GRADUATE DEGREES**

For graduate degree requirements and procedures, see *Program Requirements for UCLA Graduate Degrees and Standards and Procedures for Graduate Study at UCLA* at http://www.gdnet.ucla.edu.

**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 the 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 they expect to complete degree requirements.

**UNDERGRADUATE STUDENTS**

Approximately eight out of every 10 UCLA freshmen eventually receive a baccalaureate degree, either from UCLA or from another campus or institution. One third of all UCLA baccalaureate 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 they expect to complete degree requirements through URSA by the time they complete 160 units (172 units for engineering students) to avoid a late candidacy fee. The identified term must fall within the academic year (four quarters) subsequent to the term in which students reach or expect to reach the 160- or 172-unit mark. Once they complete 160/172 or more units, a fee is assessed each time students change the degree expected term.

Current-term or past-term candidates over the unit limit must file a UCLA Declaration of Candidacy form at 1113 Murphy Hall. The form is available online at http://www.registrar.ucla.edu/forms/.

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

Verify the degree expected term through URSA. For questions about degree candidacy status, Letters and Science students may inquire at 1113 Murphy Hall. Arts and Architecture, Theater, Film, and Television, Engineering, and Nursing students should see 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 second-week candidacy deadline. Students graduating in absentia are assessed the undergraduate in absentia degree service 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 in the Registrar’s Office for Letters and Science students (2200 Broad Art Center for Arts and Architecture students, 6426 Boelter Hall for Engineering students, 2-137 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 effect 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 mailed 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 URSA or at 1113 Murphy Hall. They may be assessed applicable fees.

Contact degree auditors only for questions about degree audits. Phone numbers are in the Registrar's Services Guide in the Student Services section of the Schedule of Classes. For graduation ceremony procedures, contact the College or schools.

**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 awarded at the end of Fall and Spring semesters. Consult the UCLA quarter, summer sessions, and semester calendars for the degree award date, which is the final day of the term. See http://www.registrar.ucla.edu/calendar/.  

**COMMENCEMENT**

The College and each school conduct ceremonies for their graduates. Ceremonies feature addresses and recognize candidates who have achieved high academic distinction and honors. 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 URSA.

Check with the College or school for eligibility requirements, programs, and time schedules. Further information, including the schedule of ceremonies, maps and parking, and updates, is at http://www.commencement.ucla.edu.

**DIPLOMAS**

Diplomas for both undergraduate and graduate students are available approximately three to four months after the degree award date. Information about obtaining the diploma in person (no fee) or by mail (with fee) is sent to students approximately seven weeks after the end of their final term. To expedite receipt of the diploma, students should return the Diploma Mail Request form, available at http://www.registrar.ucla.edu/forms/. Obtain recorded diploma availability information at (310) 825-8883.

**Change of Name**

To be reflected on the diploma, name changes must be submitted 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. The replacement diploma fee applies.

**Duplicate Diplomas**

If the original diploma is destroyed, a duplicate may be ordered by contacting the Registrar's Office, Diploma Reorder, 1113 Murphy Hall, or by completing the Duplicate Diploma Application available at http://www.registrar.ucla.edu/forms/. 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.

**GRADUATE STUDENTS**

Candidates for both master's and doctoral degrees must be advanced to candidacy and complete all degree requirements, including the master's thesis or comprehensive examination, or doctoral dissertation, before the degree is conferred (see the Schedule of Classes calendar for filing deadlines). For graduate degree requirements and procedures, see Program Requirements for UCLA Graduate Degrees and Standards and Procedures for Graduate Study at UCLA at http://www.gdnet.ucla.edu.
The UCLA campus has one College and 11 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 section.

**COLLEGE OF LETTERS AND SCIENCE**

Timothy A. Stowell, Dean of Humanities
Victoria L. Sork, Dean of Life Sciences
Joseph A. Rudnick, Dean of Physical Sciences
Alessandro Duranti, Dean of Social Sciences
Judith L. Smith, Dean/Vice Provost of Undergraduate Education

UCLA
2300 Murphy Hall
Box 951430
Los Angeles, CA 90095-1430

(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 24,100 students and more than 900 faculty members, the College is the largest academic unit in the UC system. The College offers more than 130 majors leading to the Bachelor of Arts, Bachelor of Science, or Bachelor of Arts and Sciences (B.A.S.), as well as to master's and doctoral degrees.

For a complete list of College of Letters and Science degrees, see the table in the front of this catalog.

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 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. Musicologists and 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. See http://www.humanities.ucla.edu.

**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. Neuroscientists, neurophysiologists, psychologists, 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. See http://lifesciences.ucla.edu.

**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. See http://www.physics.ucla.edu.

**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. See http://www.sscnet.ucla.edu/college/.

**UNDERGRADUATE EDUCATION**

The Undergraduate Education Division serves as the campuswide advocate for undergraduate education, promoting academic success for UCLA’s diverse undergraduate population and ensuring options for all students to engage in a challenging array of educational opportunities, from foundational general education courses to advanced research and honors projects. See http://www.ugeducation.ucla.edu.

**Academic Advancement Program.** The Academic Advancement Program (AAP) is a multicultural, 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. See http://www.aap.ucla.edu.

**Center for Community Learning.** The Center for Community Learning (CCL) serves faculty members, undergraduate students, and community partners through academic courses and programs, including credit-bearing internships, service learning courses, community-based research, and service scholarships. It is home to the undergraduate minor in Civic Engagement. See http://www.communitylearning.ucla.edu.

**Center for Educational Assessment.** The Center for Educational Assessment provides information and analysis to support planning, program and policy development, and other decision making about undergraduate education at UCLA. See http://www.ugeducation.ucla.edu/assessment/.

**College Academic Counseling.** College Academic Counseling (CAC) provides college undergraduate students with counseling 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. See http://www.ugeducation.ucla.edu/counseling/.

**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, Phi Beta Kappa, Honors Scholarships, Honors Research Stipends, and specialized counseling and support services for College honors students. See http://www.honors.ucla.edu.

**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-day transfer student sessions, a unique set of comprehensive and engaging programs is offered to make student transitions to UCLA great ones. See http://www.newstudents.ucla.edu.

**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. See http://www.oid.ucla.edu.

**Scholarship Resource Center.** The Scholarship Resource Center (SRC) is designed to help students in the search for private scholarships, regardless of financial aid eligibility. See http://www.ugeducation.ucla.edu/src/.

**Transfer Alliance Program.** The Transfer Alliance Program (TAP) seeks to strengthen academic ties between UCLA and honors programs in over 45 California community colleges to provide specialized transfer pro-

Undergraduate Education Initiatives. Undergraduate Education Initiatives are innovative programs designed for lower division students that feature best practices in undergraduate education and attract UCLA's most distinguished faculty members from all campus areas. Programs include College General Education, Fiat Lux Freshman Seminar Program, Freshman Cluster Program, and Writing II Program. See http://www.ugeducation.ucla.edu/uei/.

Undergraduate Research Centers. Undergraduate Research Centers (URC)—one for students in the arts, humanities, and social 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. See http://www.ugresearch.ucla.edu.

UNDERGRADUATE DEGREE REQUIREMENTS

For a complete list of College of Letters and Science degrees, see the table in the front of this catalog.

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 provide general foundations of human knowledge. In upper division courses, they concentrate on one major field of interest.

As described below, College students must meet three types of requirements for the Bachelor of Arts or Bachelor of Science degree:

1. University requirements
2. College requirements
3. Department requirements

UNIVERSITY REQUIREMENTS

The University of California has two requirements that undergraduate students must satisfy in order to graduate: (1) Entry-Level Writing or English as a Second Language and (2) 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 for transfer credit an English composition course after enrolling at UCLA. See Degree Requirements in the Undergraduate Study section for details.

COLLEGE REQUIREMENTS

The College of Letters and Science has seven requirements that must be satisfied for the award of the degree: unit, scholarship, academic residence, writing, quantitative reasoning, foreign language, and general education.

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 or international baccalaureate (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.

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’s 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

<table>
<thead>
<tr>
<th>College of Letters and Science Structure of a Degree</th>
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<tbody>
<tr>
<td><strong>University Requirements</strong></td>
</tr>
<tr>
<td>1. Entry-Level Writing or English as a Second Language</td>
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<tr>
<td>2. American History and Institutions</td>
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<tr>
<td><strong>College Requirements</strong></td>
</tr>
<tr>
<td>1. Unit</td>
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<tr>
<td>2. Scholarship</td>
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<td>3. Academic Residence</td>
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<td>4. Writing Requirement</td>
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<td>Writing I</td>
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<td>5. Quantitative Reasoning</td>
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<td>6. Foreign Language</td>
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<td>7. General Education</td>
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<tr>
<td>Foundations of Arts and Humanities</td>
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<tr>
<td>Foundations of Society and Culture</td>
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<tr>
<td>Foundations of Scientific Inquiry</td>
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<tr>
<td><strong>Department Requirements</strong></td>
</tr>
<tr>
<td>1. Preparation for the Major</td>
</tr>
<tr>
<td>2. The Major</td>
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</tbody>
</table>

Courses that do not satisfy specific University, College, or department requirements are referred to as electives and can be used to meet the minimum unit requirement for graduation.
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 or 3H, or an equivalent course, with a grade of C or better (C– or a Passed grade is not acceptable). The Writing I requirement may also be satisfied by scoring 4 or 5 on one of the College Board Advanced Placement Tests in English or a combination of a score of 720 or higher on the SAT Reasoning Test Writing Section and superior performance on the English Composition 3 Proficiency Examination.

Students whose native language is not English may satisfy the Writing I requirement by completing English as a Second Language 36 or an equivalent course with a grade of C or better (C– or a Passed grade is not acceptable). Admission into the course is determined by completion of English as a Second Language 35 with a passing grade or proficiency demonstrated on the English as a Second Language Placement Examination (ESLPE). Qualifying examination scores and courses are determined by the College Faculty Executive Committee. Qualifying scores may be viewed on the Office of Undergraduate Admissions and Relations with Schools website. Approved courses are published in the UCLA Schedule of Classes.

**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 at [http://www.registrar.ucla.edu/soc/schedule-of-classes](http://www.registrar.ucla.edu/soc/schedule-of-classes).

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 requirement. 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 has no scheduled examination. 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 has no scheduled examination. 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 has no scheduled examination. 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 has no scheduled examination. 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 has no scheduled examination.

**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 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.

The following language courses may be used to fulfill the foreign language requirement:

- **African Languages (Applied Linguistics)** 1A-1B-1C or 15 (Swahili); 7A-7B-7C or 17 (Zulu); 11A-11B-11C or 25 (Yoruba); 27 (Xhosa); 29 (Igbo); 31A-31B-31C or 35 (Bambara); 41A-41B-41C or 45 (Hausa); 51A-51B-51C or 56 (Amharic); 55 (Tigrinya); 61A-61B-61C ( Wolof); 75 (Chichewa); 85 (Setswana) Afrikaans (Germanic Languages) 105A and 105B Ancient Near East (Near Eastern Languages) 120A-120B-120C (Ancient Egyptian); 140A-140B-140C (Sumerian)
- **Arabic (Near Eastern Languages)** 1A-1B-1C or 8 Armenian (Near Eastern Languages) 101A-101B-101C or 104A-104B-104C Berber (Near Eastern Languages) 101A-101B-101C Bulgarian (Slavic Languages) 101A-101B-101C Chinese (Asian Languages) 1, 2, and 3, or 1A, 2A, and 3A, or 8 or 8A Czech (Slavic Languages) 101A-101B-101C Dutch (Germanic Languages) 103A-103B, and 103C, or 104A-104B
Filipino (Asian Languages) 1, 2, and 3, or 8
French (French and Francophone Studies) 1, 2, and 3, or 8
German (Germanic Languages) 1, 2, and 3, or 8
Greek (Classics) 1, 2, and 3, or 16; 8A-8B-8C or 15 (Modern Greek)
Hebrew (Near Eastern Languages) 1A-1B-1C or 8
Hindi-Urdu (Asian Languages) 1, 2, and 3, or 3R
Hungarian (Slavic Languages) 101A-101B-101C
Indigenous Languages of the Americas (Linguistics) 17 or
18A-18B-18C (Quechua)
Indonesian (Asian Languages) 1, 2, and 3
Iranian (Near Eastern Languages) 1A-1B-1C or 8 or 20A-20B-20C (Persian); 111A-111B-111C (Kurdish)
Italian 1, 2, and 3, or 9
Japanese (Asian Languages) 1, 2, and 3, or 8
Korean (Asian Languages) 1, 2, and 3, or 1A, 2A, and 3A, or 8
Latin (Classics) 1, 2, and 3, or 16
Lithuanian (Slavic Languages) 101A-101B-101C or 103
Polish (Slavic Languages) 101A-101B-101C
Portuguese (Spanish and Portuguese) 1, 2, and 3, or 102A-102B
Romanian (Slavic Languages) 101A-101B-101C or 103
Russian (Slavic Languages) 1, 2, and 3, or 10 or 11A-13B
(two units each) or 15A-15B or 100B
Scandinavian 1, 2, and 3, or 8 (Swedish); 11, 12, and 13
(Norwegian); 21, 22, and 23 (Danish)
Semitics (Near Eastern Languages) 140A-140B and 141
(Akkadian)
Serbian/Croatian (Slavic Languages) 101A-101B-101C
South Asian Languages 110A (Sanskrit)
Spanish (Spanish and Portuguese) 1, 2, and 3, or 2A and
3A, or 10
Thai (Asian Languages) 1, 2, and 3, or 3R
Turkish Languages (Near Eastern Languages) 101A-101B-101C
(Turkish); 111A-111B-111C (Uzbek); 115A-115B-115C (Azeri)
Ukrainian (Slavic Languages) 101A-101B-101C
Vietnamese (Asian Languages) 1, 2, and 3, or 1A, 2A, and
3A, or 8
Yiddish (Germanic Languages) 101A, 101B, and 101C, or 102B

GENERAL EDUCATION REQUIREMENTS

General education (GE) is more than a checklist of required courses. It is a program of study that (1) reveals to students the ways that research scholars in the arts, humanities, social sciences, and natural sciences create and evaluate new knowledge, (2) introduces students to the important ideas and themes of human cultures, (3) fosters appreciation for the many perspectives and the diverse voices that may be heard in a democratic society, and (4) 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.

Transfer students with 90 or more units who have completed the Intersegmental General Education Transfer Curriculum (IGETC) will have satisfied the general education requirements.

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 GE Cluster series (1) fulfill the Writing II requirement, (2) complete a third of their general education requirements, and (3) 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 provide perspectives and intellectual skills necessary to comprehend and think critically about our situation in the world as human beings. In particular, the courses provide 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

College of Letters and Science

<table>
<thead>
<tr>
<th>General Education Requirements</th>
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<tbody>
<tr>
<td>Foundations of the Arts and Humanities</td>
<td>1 Course</td>
</tr>
<tr>
<td>Literary and Cultural Analysis</td>
<td></td>
</tr>
<tr>
<td>Philosophical and Linguistic Analysis</td>
<td>1 Course</td>
</tr>
<tr>
<td>Visual and Performance Arts Analysis and Practice</td>
<td>1 Course</td>
</tr>
<tr>
<td>Total = 15 units minimum</td>
<td></td>
</tr>
<tr>
<td>Foundations of Society and Culture</td>
<td></td>
</tr>
<tr>
<td>Historical Analysis</td>
<td>1 Course</td>
</tr>
<tr>
<td>Social Analysis</td>
<td>1 Course</td>
</tr>
<tr>
<td>Third course from either subgroup</td>
<td>1 Course</td>
</tr>
<tr>
<td>Total = 15 units minimum</td>
<td></td>
</tr>
<tr>
<td>Foundations of Scientific Inquiry</td>
<td></td>
</tr>
<tr>
<td>Life Sciences</td>
<td>2 Courses</td>
</tr>
<tr>
<td>Physical Sciences</td>
<td>2 Courses</td>
</tr>
<tr>
<td>In each subgroup, one of the two courses must be 5 units and carry either laboratory/demonstration or Writing II credit. For students entering Fall Quarter 2009 through Fall Quarter 2011, the laboratory requirement is reduced to one 5-unit course from either subgroup. Other courses in the subgroups may be 4 units.</td>
<td></td>
</tr>
<tr>
<td>Total = 18 units minimum (17 min. Fall 2009-Fall 2011)</td>
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</tr>
<tr>
<td>Total GE</td>
<td>10 Courses/48 Units Minimum</td>
</tr>
</tbody>
</table>
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 Fall Quarter 2011, the laboratory requirement 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 counselor or see [http://www.registrar.ucla.edu/ge/](http://www.registrar.ucla.edu/ge/).

**Advanced Placement Test Credit**

Students may not use Advanced Placement (AP) credit to satisfy the College's 10-course foundational area general education requirement. See the AP Chart at [http://www.admissions.ucla.edu/Prospect/APCreditLS.htm](http://www.admissions.ucla.edu/Prospect/APCreditLS.htm). Consult a departmental or College counselor 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 UCLA GE requirements are fulfilled when students complete the IGETC courses. Students who select the IGETC must complete it entirely before enrolling at UCLA.

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 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.

**DEPARTMENT REQUIREMENTS**

College departments generally set two types of requirements that must be satisfied for the award of the degree: (1) Preparation for the Major (lower division courses) and (2) the Major (upper division courses). Departments also set requirements for minors and specializations.

**PREPARATION FOR THE MAJOR**

Admission to a major often requires completion of a set of courses known as Preparation for the Major. 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 requirements; see the Curricula and Courses section 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 section 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 subject area 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 major that is also a designated 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 the Honors Programs Office, A311 Murphy Hall, (310) 825-1553. See http://www.honors.ucla.edu/individual.html.

**Double Majors.** Students in good academic standing 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.

With few exceptions, double majors in the same department are unacceptable. No more than 20 upper division units may be common to 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.

Specializations, such as the Computing specialization, are sequences of supplemental courses that enhance work in a major.

For a list of minors and specializations, see the chart at the beginning of this catalog; descriptions are in the Curricula and Courses section.

**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 Progress Report (DPR) 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. College Academic Counseling staff members assist students with College requirements and degree planning and provide DPRs on request. Students can also view DPRs through URSA.

**MINIMUM PROGRESS/E XPECTED 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 Chart at http://www.ugeducation.ucla.edu/counseling/regulations/exporg.htm.

The following courses count toward minimum progress and expected cumulative progress but are exempt from the maximum unit limit of 216: 19 (Fiat Lux), 88S (Undergraduate Student Initiated Education 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 101E, Life Sciences 71SL, 72SL, 73SL, Mathematics 71SL, and 72SL.

**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 educational fee by one half and a reduction of the nonresident 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 the petition, Undergraduate Request for Fee Reduction, from College Academic Counseling. 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 or lose 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 on a Petition for Declaration of Major 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. 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; consult the appropriate department regarding minimum standards.

**Reentering 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 counselor for assistance.

**Credit Limitations**

The following credit limitations apply to all undergraduate students enrolled in the College. In most cases units are not deducted until the final term before graduation. Students with questions should consult an academic counselor.

Transfer students with credit from other institutions (advanced standing credit) receive a Degree Progress Report (DPR) from Undergraduate Admissions and Relations with Schools 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 a counselor in College Academic Counseling about these limitations.

**Advanced Placement Tests.** Advanced Placement (AP) Test 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 AP chart at http://www.admissions.ucla.edu/Prospect/APCreditLS.htm 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 Unit Limit.** After completing 105 quarter units toward the degree in all institutions attended, students are allowed no further unit credit for courses completed at a community college.

**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 UCLA 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 the Honors Programs Office, 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 6 through 16, 56 through 65, C109A, C113A, C115A, 116, Ethnomusicology 91A through 91Z, 161A through 161Z, Music 60A through 65, C90A through 90S, 160A through 165, and World Arts and Cultures 5, 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 activities courses may be applied toward the bachelor's degree.

Physics Courses. Any two or more courses from Physics 1A, 1AH, 6A, and 10 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: Economics 41, Statistics 10, 11, 12, 13, 14 (or former Anthropology M80, Geography M40, Sociology M18, Statistics 10A, or 10H), 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 restrictions 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.

HONORS

College undergraduate students who achieve scholastic distinction may qualify for the following honors and programs:

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 better. The program provides exceptional undergraduate students an opportunity to pursue individual excellence.

For details on the College Honors program and entry requirements, see http://www.honors.ucla.edu/program.html.

DEAN'S HONORS

The Dean's Honors list recognizes high scholastic achievement 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 program. See the Curricula and Courses section of this catalog for details, and consult the departmental adviser about procedures and arrangements. Students who successfully complete the requirements graduate with departmental 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 graduates (GPA of 3.890 or better) for summa cum laude, the next five percent (GPA of 3.813 or better) for magna cum laude, and the next 10 percent (GPA of 3.684 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 Progress Reports or the Schedule of Classes 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 further information, contact the Honors Programs Office in A311 Murphy Hall or see http://www.honors.ucla.edu/deptschl.html.

GRADUATE STUDY

The College of Letters and Science provides graduate students virtually unlimited 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 doctoral degrees. For complete degree requirements, see Program
Requirements for UCLA Graduate Degrees at http://www.gdnet.ucla.edu/gasaa/library/pgmrqintro.htm.

For information on the proficiency in English requirements for international graduate students, see Graduate Admission in the Graduate Study section of this catalog.

DAVID GEFEN
SCHOOL OF MEDICINE

A. Eugene Washington, Dean and Vice Chancellor

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At the David Geffen School of Medicine at UCLA, faculty members and students play a dynamic role on campus and in the Los Angeles community. Not only are they in the clinics, wards, and operating rooms of the Ronald Reagan UCLA Medical Center and multiple private and public affiliated medical centers, they are also at work in the facilities of many research programs of the school and broader University. They volunteer in community clinics, health fairs, and public schools, and participate in research and clinical care in multiple global settings.

Students at the Geffen School of Medicine are exposed to the best of many worlds—strong research-oriented basic and clinical science departments, a hospital consistently ranked among the nation’s elite, superb affiliated clinical facilities that provide the full spectrum of teaching settings and patient populations, a biomedical library that is considered one of the world’s best, and a multidisciplinary global health program. Geffen School of Medicine departments are staffed by a distinguished faculty of respected researchers and practitioners.

DEGREES AND PROGRAMS

The Geffen School of Medicine offers an M.D. degree program, special programs in affiliation with other hospitals and universities, postgraduate medical training programs, and the following master’s and doctoral degrees offered through the UCLA Graduate Division:

- Biological Chemistry (M.S., Ph.D.)
- Biomechanics (M.S., Ph.D.)
- Biomedical Physics (M.S., Ph.D.)
- Clinical Research (M.S.)
- Human Genetics (M.S., Ph.D.)
- Microbiology, Immunology, and Molecular Genetics (M.S., Ph.D.)
- Molecular and Medical Pharmacology (M.S., Ph.D.)
- Molecular, Cellular, and Integrative Physiology (Ph.D.)
- Neurobiology (M.S., C.Phil., Ph.D.)
- Neuroscience (Ph.D.)
- Pathology—Cellular and Molecular Pathology (M.S., Ph.D.)
- Psychiatry and Biobehavioral Sciences Clinical Psychology Internship (Certificate)

M.D. DEGREE PROGRAM

The Doctor of Medicine (M.D.) degree program develops a comprehensive scientific and humanistic approach to patient care that includes basic sciences, preventive medicine, diagnosis, and therapeutic skills for evidence-based medicine. Clinical skills are taught in the context of anatomical, molecular, pathophysiological, and psychosocial factors in health, disease, and treatment.

The curriculum is an innovative, integrated, organ system-based program, with problem-based learning case studies to link basic, clinical, and social studies. Because medical school is but one phase in a physician's education, the curriculum stresses self-directed learning to prepare students for a future in which scientific knowledge, social values, and human needs are ever changing. Formats for instruction include lectures, problem-based learning tutorials, seminars, laboratories, standardized patient exercises, and clinical experiences; students are involved in patient care from their first week through graduation.

The M.D. 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. The curriculum emphasizes issues of growing importance such as primary care, research opportunities for careers in academic medicine, human genetics and the evolving world of gene therapy, psychosocial issues of health and disease, evidence-based medicine, medical ethics, and clinical reasoning.

For details on the M.D. curriculum or to apply to the program, see http://www.medstudent.ucla.edu/prospective/ or contact the Geffen School of Medicine Admissions Office, 12-105 Center for the Health Sciences, UCLA, Box 957035, Los Angeles, CA 90095-7035. See http://career.ucla.edu/Students/GradProfSchCounseling/Overview.aspx for details on the four-year premedical studies program.

SPECIAL PROGRAMS

Special programs address the needs and issues of specific communities and populations.

UCR/UCLA Thomas Haider Program in Biomedical Sciences

The UCR/UCLA Thomas Haider Program in Biomedical Sciences is a cooperative venture involving UC Riverside, the Geffen School of Medicine, and selected Riverside community sites. The program mission is to prepare graduates for distinguished medical careers in service to the people of California, with emphasis on the needs of the underserved, inland, and rural populations. See http://biomed.ucr.edu/prospective_students/index.html.

CDU/UCLA Medical Education Program

The CDU/UCLA Medical Education Program is designed to attract students who are interested in addressing the concerns of urban underserved populations. Students in the program 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. See http://www.cdrewu.edu/CDU_UCLAMedicalStudentProgram/.

**UCLA PRIME Program**

The UCLA PRIME Program is a five-year program to develop leaders in medicine who address policy, care, and research issues in healthcare for underserved populations. The program leads to the M.D. and a master’s degree in areas that complement the mission of the program. PRIME students may pursue a master’s degree at UCLA in either the concurrent program with the John E. Anderson Graduate School of Management (M.D./M.B.A.) or the articulated program with the School of Public Health (M.D./M.P.H.). A separate application to the Anderson School or the School of Public Health required for admission is made during the third year. Each year the class is comprised of 18 students. Students identify with one of three programs: PRIME-UCLA-WESTWOOD, PRIME-UCLA-UCR, or PRIME-UCLA-CDU. A commitment to serve and experience in working with diverse medically disadvantaged populations is paramount. See http://www.medsch.ucla.edu/uclaprime/ or call (310) 794-5912.

**ARTICULATED AND CONCURRENT DEGREE PROGRAMS**

The Geffen School of Medicine and the Graduate Division offer an articulated degree program that allows students to earn both the M.D. and Ph.D. in about seven years, depending on the course of study and research. The Ph.D. may be awarded in one of several medical sciences fields. Call the Medical Scientist Training Program at (310) 794-1817 for details or see http://mstp.healthsciences.ucla.edu/pages/.

A concurrent program with the John E. Anderson Graduate School of Management and an articulated program with the School of Public Health allow UCLA medical students to earn both the M.D. and M.B.A. or the M.D. and M.P.H. degrees over five years by following a designated course of study and some shared coursework. Separate application must be made to the Anderson School or School of Public Health during the third year of medical school. Call (310) 825-3970 for information.

**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 provide 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. For further information, see http://www.semel.ucla.edu.

**GRADUATE SCHOOL OF EDUCATION AND INFORMATION STUDIES**

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The Graduate School of Education and Information Studies (GSE&IS) 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, UCLA Lab School (Corinne A. Seeds campus) provides an innovative educational program for students 4 to 12 years old.

**DEGREES**

The school offers the following degrees, in addition to an undergraduate minor in Education Studies:

- Education (M.A., M.Ed., Ed.D., Ph.D.)
- Educational Administration (Joint Ed.D. with UC Irvine)
- Information Studies (Ph.D.)
- Library and Information Science (M.L.I.S., accredited by American Library Association)
- Moving Image Archive Studies (M.A.)
- Special Education (Joint Ph.D. with California State University, Los Angeles)

**Credential Programs**

The school offers three credential programs that are accredited by the California Commission on Teacher Credentialing:

- Administrative Services Credential
- Preliminary Administrative Services Credential
- Teacher Credential

**Articulated Degree Programs**

The school offers two articulated degree programs:

- Education M.Ed./Latin American Studies M.A.
- Library and Information Science M.L.I.S./Latin American Studies M.A.

**Concurrent Degree Programs**

The school offers two concurrent degree programs:

- Education M.Ed., M.A., Ed.D., or Ph.D./Law J.D.
- Library and Information Science M.L.I.S./Management M.B.A.

**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 postbaccalaureate study. Further requirements for international students are explained in the Graduate Study section. See http://www.gdnet.ucla.edu/gasaa/admissions/admininfo.html.

Departments and programs in the school set additional admission requirements. See http://gseis.ucla.edu/for/prospective-students/.

**DEGREE REQUIREMENTS**

Specific degree requirements vary according to the department and program. Refer to Program Requirements for UCLA Graduate Degrees at http://www.gdnet.ucla.edu/gasaa/library/pgmrqintro.htm.

**RESEARCH CENTERS AND INSTITUTES**

The centers and institutes outlined below provide GSE&IS with valuable resources that support school programs and research. See http://gseis.ucla.edu/about/research/research-centers/.

**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. See http://www.blackmaleinstitute.org.

**CENTER FOR GLOBAL EDUCATION**

The Center for Global Education promotes international education to foster cross-cultural awareness, cooperation, and understanding. The center collaborates with colleges, universities, and other organizations around the world to create new and enhance existing study abroad programs, integrate an international and intercultural perspective into the U.S. educational system, increase the ethnic diversity of participants in study abroad, and provide resources to support their participation. See http://globaled.us.

**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 local evaluation process, building relationships with community partners to inform research, practice, and professional development. The center has assisted numerous community-based agencies in evaluating the effectiveness of their programs to improve the quality of early care and education programs. CICCCQ also works with
local government and policy groups, including the Los Angeles County First 5 Commission, Los Angeles County Office of Child Care, and Los Angeles Universal Preschool. See http://gseis.ucla.edu/~ciccq/.

**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. The center is currently working with archival educators from across the country and around the world in a multiyear Institute of Museum and Library Services (IMLS) grant to expand archival education and research through a doctoral fellowship program and the Archival Education and Research Institute (AERI). More information about CIE is available at http://gseis.ucla.edu/cie/. See http://aeri.gseis.ucla.edu for information about AERI.

**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. Research and training are conducted in such areas as teacher development and higher education transformation. CIDE acts as a hub for researchers, graduate students, and organizations to network with and learn about critical issues in international and development education from a wide range of fields and disciplines. See http://www.cideucla.org.

**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 are designed to examine children’s learning and development from preschool to sixth grade; investigate the work of 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 knowledge through its website, newsletter, publications, and professional development workshops cosponsored with UCLA Lab School. See http://www.connect.gseis.ucla.edu.

**CENTER FOR STUDY OF EVALUATION/ NATIONAL CENTER FOR RESEARCH ON EVALUATION, STANDARDS, AND STUDENT TESTING**
For over 40 years, the Center for Study of Evaluation (CSE) and, more recently, the National Center for Research on Evaluation, Standards, and Student Testing (CRESST) have contributed to the development of scientifically based evaluation and testing techniques, vigorously encouraged the development, validation, and use of sound data for improved accountability and decision making, and aggressively explored technological applications to improve assessment and evaluation practice. Today CSE/CRESST research and development serve government, military, and pre-K through college-level education and training. CSE/CRESST models-based accountability research and development are being scaled to help learners of almost every age. See http://www.cse.ucla.edu.

**CENTER X**
Center X provides a unique setting where researchers and practitioners collaborate to design and conduct programs that prepare and support K-12 education professionals in urban schools. Center X carries out its work through the preservice Teacher Education Program, Principal Leadership Institute, School-University Partnerships, California Subject Matter Projects, and research and publications. Center X work is guided by a series of conceptual principles that prepare and support teachers, principals, and other school leaders to have the commitment, capacity, and resilience to promote social justice, caring, and instructional equity in underperforming urban schools. See http://centerx.gseis.ucla.edu.

**CIVIL RIGHTS PROJECT/PROYECTO DERECHOS CIVILES**
The Civil Rights Project/Proyecto Derechos Civiles is a research center dedicated to creating a new generation of research on civil rights and racial and ethnic equity. It was founded in 1996 and moved from Harvard University to UCLA in 2007. It is dedicated to bridging the gap between research, law, and policy and to very serious communication across disciplines and between the University and community leaders, educators, policymakers, and civil rights advocates. The project is nonpartisan and involves collaboration with researchers across the nation. It works both on leading-edge current issues and on long-term issues that must be resolved to achieve racial and ethnic equity in the U.S. Its work is consistently multicultural in nature. At UCLA it is intensifying its interests in issues of immigration and language rights and developing a special focus on California and the greater Los Angeles area. See http://civilrightsproject.ucla.edu.

**HIGHER EDUCATION RESEARCH INSTITUTE**
The Higher Education Research Institute (HERI) serves as an interdisciplinary center for research, evaluation, information, policy studies, and research training in postsecondary education. HERI’s research program covers a variety of topics, including the outcomes of postsecondary education, leadership development, institutional transformation, faculty performance, federal and state policy, and educational equity. Visiting scholars, faculty members, and graduate students have made use of HERI facilities and research resources since its affiliation with UCLA in 1973. The institute’s holdings include more than 100 datasets that are regularly maintained for analysis of postsecondary education. See http://gseis.ucla.edu/ heri/index.php.
ENGINEERING AND APPLIED SCIENCE

HENRY SAMUELI

SCHOOL OF

EVOLVING FIELDS OF ENGINEERING AND APPLIED SCIENCE

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, activists, 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. See http://www.idea.gseis.ucla.edu.

PAULO FREIRE INSTITUTE

The Paulo Freire Institute/UCLA (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. The objective of PFI is to bring 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 (research on gender, race, class, and the state), and Paulo Freire's political philosophy and critical pedagogy. See http://www.paulofreireinstitute.org.

SCHOOL MANAGEMENT PROGRAM

The School Management Program (SMP) is a non-profit school reform initiative committed to the sustainable transformation of schools into learner-centered organizations where all students can achieve at high levels. Teams work with school communities to improve student achievement by fostering collaborative learning communities resulting in personal transformation through a continuous cycle of inquiry and where professional development enhances teacher effectiveness. The SMP model of school improvement planning provides sound tools/processes that support the ongoing learning of both the individual and the organization. See http://www.smp.gseis.ucla.edu.

SUDIKOFF FAMILY INSTITUTE FOR EDUCATION AND NEW MEDIA

Enhancing awareness of critical issues related to education and information studies, 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 inform the public and provide perspective on a number of issues in education and new media. The institute serves as a liaison between the Fellows and the greater public, offering communications support and expertise.

See http://gseis.ucla.edu/sudikoff/.

UC ALL-CAMPUS CONSORTIUM ON RESEARCH FOR DIVERSITY

The UC All-Campus Consortium on Research for Diversity (UC ACCORD) is an interdisciplinary, multicampus research center devoted to a more equitable distribution of educational resources and opportunities in California's diverse public schools and universities. This distinctive UC voice serves as an information and research clearinghouse and catalyst for promoting the delivery of high-quality, equitable schooling to all students. UC ACCORD harnesses the research expertise of the University of California to identify strategies that will increase college preparation, access, and retention. Policymakers, researchers, teachers, outreach staff, and students all benefit from this source of reliable information for equitable education policy and practice. See http://ucaccord.gseis.ucla.edu.

HENRY SAMUELI

SCHOOL OF

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APPLIED SCIENCE

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http://www.engineer.ucla.edu

Over the years, UCLA Engineering has grown into one of the top engineering programs in the country. Though the school has changed in many ways, it has not wavered from its early vision of developing an engineering program with imagination and integrity. The UCLA Henry Samueli School of Engineering and Applied Science, founded in 1945, is committed to creating a better future for Los Angeles, California, and the world.

UCLA Engineering supports dynamic programs in traditional and new areas of study and research, including bioengineering, embedded network sensing systems, bio-nano-info technologies, wireless communications and computing, signal processing, sensor technologies, nanotechnology and nanomanufacturing, automated flight and autonomous systems, alternative energy systems, smart structures and materials, and protection of the environment. Partnerships across campus reflect the school's commitment to a wide range of interdisciplinary activities.

Students receive their education through lectures and gain hands-on experience through laboratories and participation in real-world applications. The undergraduate degree curriculum provides well-rounded exposure to the humanities, social sciences, life sciences, and the fine arts. It also includes a technical breadth requirement, designed for students to gain a working knowledge of a technical field outside their
major. The school also recognizes that engineers have the ethical and social responsibility to create, protect, and manage technology. Students are committed to a high standard of achievement and contribute to the excellence in engineering at UCLA.

DEPARTMENTS AND PROGRAMS

The Henry Samueli School of Engineering and Applied Science has seven departments and one interdisciplinary program offering study in aerospace engineering, bioengineering, biomedical engineering, chemical engineering, civil engineering, computer science and engineering, electrical engineering, manufacturing engineering, materials engineering, and mechanical engineering—all of which are accredited by the Accreditation Board for Engineering and Technology (ABET), the nationally recognized accrediting body for engineering programs. The computer science and computer science and engineering programs are accredited by the Computing Accreditation Commission of ABET, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012, (410) 347-7700.

For specific programs, see the department information in the Curricula and Courses section or refer to the school Announcement available from the Office of Academic and Student Affairs, 6426 Boelter Hall.

DEGREES

The school offers the following degrees, in addition to an undergraduate minor in Environmental Engineering:

- Aerospace Engineering (B.S., M.S., Ph.D.)
- Bioengineering (B.S.)
- Biomedical Engineering (M.S., Ph.D.)
- Chemical Engineering (B.S., M.S., Ph.D.)
- Civil Engineering (B.S., M.S., Ph.D.)
- Computer Science (B.S., M.S., Ph.D.)
- Computer Science and Engineering (B.S.)
- Electrical Engineering (B.S., M.S., Ph.D.)
- Engineering (M.Engr., online M.S., Engr.)
- Engineering and Applied Science (Graduate Certificate of Specialization)
- Manufacturing Engineering (M.S.)
- Materials Engineering (B.S.)
- Materials Science and Engineering (M.S., Ph.D.)
- Mechanical Engineering (B.S., M.S., Ph.D.)

Concurrent Degree Program

The school offers one concurrent degree program:

- Computer Science M.S./Management M.B.A.

UNDERGRADUATE ADMISSION

Applicants for admission to the school must satisfy the University admission requirements as outlined in the Undergraduate Study section. Students must select a major within the school when applying for admission. 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 section 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 UCLA Undergraduate Admissions and Relations with Schools.

Applicants must submit scores from an approved core test of mathematics, language arts, and writing. This requirement may be satisfied by taking either (1) the ACT Assessment plus Writing Tests or (2) the SAT Reasoning 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.

Applicants seeking admission to the school in freshman standing must also satisfy the following University admission requirements:

- United States History (one year of U.S. history and one-half year of civics or American government) 1 year
- English 4 years
- Mathematics 4 years
- Physics 1 year
- Chemistry 1 year
- Foreign language 2 years
- Other college preparatory requirements 2 years

Credit for Advanced Placement Tests. Students may fulfill part of the school requirements with credit allowed at the time of admission for College Board Advanced Placement (AP) Tests with scores of 3, 4, or 5. Students with AP Test credit may exceed the 213-unit maximum by the amount of this credit. AP Test credit for freshmen entering in Fall Quarter 2011 fulfills HSSEAS requirements as indicated on the school AP chart at http://www.admissions.ucla.edu/Prospect/APCreditEN.htm.

Students who have completed 36 quarter units after high school graduation at the time of the examination receive no AP Test 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 complete the remaining requirements for one of the B.S. degrees in six terms (two 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 UCLA's Chemistry and Biochemistry 20A, 20B, 20L (only Chemistry and Biochemistry 20A is required for the Computer Science and Computer Science and Engineering majors and the electrical engineering and computer engineering options of the Electrical Engineering major; the Chemical Engineering curriculum also requires Chemistry and Biochemistry 30A, 30AL, 30B, 30BL, which do not need to be taken prior to admission to UCLA)
3. Physics courses equivalent to UCLA's Physics 1A, 1B, 1C, 4AL, 4BL, depending on curriculum selected
4. Computer programming courses in C++, C, or Java (C++ is strongly recommended); applicants to majors in Computer Science, Computer Science and Engineering, and Electrical Engineering must take a programming course equivalent to UCLA's Computer Science 31
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 UCLA's English Composition 3 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, are given credit for certain engineering core requirements.

Many sophomore courses in circuit analysis, strength of materials, and properties of materials may satisfy Electrical Engineering 100, Civil and Environmental Engineering 108, and Materials Science and Engineering 104 requirements respectively. Check with the Office of Academic and Student Affairs.

UNDERGRADUATE DEGREE REQUIREMENTS

Henry Samueli School of Engineering and Applied Science students must meet three types of requirements for the Bachelor of Science degree:

1. University requirements
2. School requirements
3. Department requirements

UNIVERSITY REQUIREMENTS

The University of California has two requirements that undergraduate students must satisfy in order to graduate: (1) Entry-Level Writing or English as a Second Language and (2) American History and Institutions. See Degree Requirements in the Undergraduate Study section 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, scholarship, academic residence, writing, technical breadth, ethics, and general education.

UNIT REQUIREMENT

The minimum units allowed for HSSEAS students is between 185 and 190, 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 B.S. 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'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 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 or 3H with a grade of C or better (C– or a Passed grade is not acceptable).

Writing II. The Writing II requirement must be satisfied by completing English Composition 3 or 3H 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 scoring 4 or 5 on one of the College Board Advanced Placement Tests in English or a combined score of 720 or higher on the SAT Reasoning Test Writing Section and superior performance on the English Composition 3 Proficiency Examination.

Students whose native language is not English may satisfy the Writing I requirement by completing English as a Second Language 36 with a grade of C or better (C– or a Passed grade is not acceptable). Admission into the course is determined by completion of English as a Second Language 35 with a passing grade or proficiency demonstrated on the English as a Second Language Placement Examination (ESLPE).

Writings 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, 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 (1) reveals to students the ways that research scholars in the arts, humanities, social sciences, and natural sciences create and evaluate new knowledge, (2) introduces students to the important ideas and themes of human cultures, (3) fosters appreciation for the many perspectives and the diverse voices that may be heard in a democratic society, and (4) 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 section 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.

Requirements for Students Who Entered Fall Quarter 2005 and Thereafter

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 and ethics 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.

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 provide perspectives and intellectual skills necessary to comprehend and think critically about our situation in the world as human beings. In particular, the courses provide 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 Biomedical Engineering 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 majors, Chemical Engineering majors, and the biomedical engineering option of the Electrical Engineering major. The requirement may be satisfied for Civil Engineering majors if students select an approved major field elective that is also a course approved under Foundations of Scientific Inquiry.

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 http://www.registrar.ucla.edu/ge/.

Requirements for Students Who Entered Prior to Fall Quarter 2005

For the approved list of courses, see http://www.seasoasa.edu/undergraduates/general-education-requirements/prior-to-fall-2005-ge-list/.

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: (1) Preparation for the Major (lower division courses) and (2) 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 section 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 section of this catalog for details on each major.

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 Tests.** Some portions of Advanced Placement (AP) Test 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 chart at http://www.admissions.ucla.edu/prospect/APCreditEN.htm.

- **College Level Examination Program.** Credit earned through the College Level Examination Program (CLEP) may not be applied toward the bachelor's degree.

- **Community College Unit Limit.** After students have completed 105 quarter units (regardless of where the units are completed), they do not receive unit credit or subject credit for courses completed at a community college.

- **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.

**DOUBLE MAJORS**

Students in good academic standing may be permitted to have a double major consisting of a major within HSSEAS and a major outside the school (e.g., Electrical Engineering and Economics). Students are not permitted to have a double major within the school (e.g., Chemical Engineering and Civil Engineering). Contact the Office of Academic and Student Affairs for details.

**COUNSELING SERVICES**

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 effect at the time they began their community college work in an engineering program, providing attendance has been continuous since that time.

Students following the 2005-06 catalog year and thereafter use the program called Degree Audit Reporting Systems (DARS) and should contact their academic counselor in 6426 Boelter Hall with any questions. See http://www.seasoasa.ucla.edu/undergraduates/DARS/.

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 the Office of Academic and Student Affairs, 6426 Boelter Hall, to review their degree requirements.

Academic counselors in the Office of Academic and Student Affairs assist students with University procedures and answer questions related to general 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 3.858 or better) for summa cum laude, next five percent (GPA of 3.737 or better) for magna cum laude, and the next 10 percent (GPA of 3.583 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, engineering students must have a 3.858 grade-point average for summa cum laude, a 3.737 for magna cum laude, and a 3.583 for cum laude. For all designations
of honors, students must have a minimum 3.25 GPA in their major field courses. To be eligible for an award, students should have completed at least 80 upper division units at the University of California.

**TAU BETA PI**

The UCLA chapter of Tau Beta Pi, the national engineering honor society, encourages high scholarship, provides volunteer tutors, and offers many services and programs to foster a spirit of liberal culture in engineering colleges. See http://tbp.seas.ucla.edu.

**DEPARTMENTAL SCHOLAR PROGRAM**

Exceptionally promising juniors or seniors may be nominated as Departmental Scholars to pursue 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.

**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 20 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. See http://www.seas.ucla.edu/swe/.

**CONTINUING EDUCATION**

Continuing education in engineering is developed and administered by the UCLA Extension (UNEX) Department of Engineering, Information Systems, and Technical Management in close cooperation with HSSEAS. The department offers evening classes, short courses, certificate programs, special events, and education and training at the workplace. The office (540 UNEX, 10995 Le Conte Avenue) is open Monday through Friday. Call (310) 825-4100 for information systems and engineering programs, (310) 825-3344 for short course programs, (310) 206-1548 for technical management classes, and (310) 825-3858 for the Technical Management Program. See http://www.uclaextension.edu.

**GRADUATE 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/Ph.D. 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. Normally the M.S. degree is required for admission to the Ph.D. program. Exceptional students, however, can be admitted to the Ph.D. program without having an M.S. degree.

For information on the proficiency in English requirements for international graduate students, see Graduate Admission in the Graduate Study section of this catalog.

To submit a graduate application, see http://www.seas.oasa.ucla.edu/admissions/graduate-admissions/. 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 at http://www.gdnet.ucla.edu/gasaa/library/pgmrqintro.htm.

**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 M.S. program focuses on one major field. The major fields and subdisciplines offered at the M.S. level in most cases parallel those listed below for the Ph.D. program. There are some differences (for example, manufacturing engineering in the Department of Mechanical and Aerospace Engineering is offered only at the M.S. level). Contact the department concerned regarding possible differences between the M.S. and Ph.D. 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 M.S. 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 provide 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 M.S. degree is expected. There is no examination under the thesis plan.

Comprehensive Examination Plan
The comprehensive examination, which is offered every term, is required in written form only. The comprehensive examining committee may conduct an oral query after review of the written examination. In case of failure, students may be reexamined once with the consent of their departmental graduate adviser.

CONCURRENT DEGREE PROGRAM
A concurrent degree program between HSSEAS and the John E. Anderson Graduate School of Management allows students to earn two master's degrees simultaneously: the M.B.A. and the M.S. 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 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. For further information, see http://msengrol.seas.ucla.edu.

MASTER OF ENGINEERING DEGREE
The Master of Engineering (M.Engr.) 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. For details, write to the HSSEAS Office of Academic and Student Affairs, 6426 Boelter Hall, UCLA, Box 951601, Los Angeles, CA 90095-1601, (310) 825-2514.

ENGINEER DEGREE
HSSEAS offers an Engineer (Engr.) degree at a level equivalent to completion of preliminaries in the Ph.D. program. The Engineer degree represents considerable advanced training and competence in the engineering field but does not require the research effort involved in a Ph.D. dissertation.

Requirements for the Engineer degree are identical to those of the Ph.D. 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 Ph.D. and Engineer degree programs are administered interchangeably, so that a student in the Ph.D. program may exit with an Engineer degree or pick up the Engineer degree en route to the Ph.D. degree; similarly, a student in the Engineer degree program may continue to the Ph.D. 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.

PH.D. DEGREES
The Ph.D. programs prepare students for advanced study and research in the major areas of engineering and computer science. All candidates must fulfill the minimum requirements of the Graduate Division. Major and minor fields may have additional course and examination requirements. For further information, contact the individual departments.

Fields of Study
Established fields of study for the Ph.D. 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.

Biomedical Engineering Interdepartmental Program. Biomaterials, tissue engineering, and biomechanics; biomedical instrumentation; biomedical signal and image processing; biosystem science and engineering; medical imaging informatics; molecular and cellular bioengineering; neuroengineering

Chemical and Biomolecular Engineering Department. Chemical engineering

Civil and Environmental Engineering Department. Environmental engineering, geotechnical engineering,
hydrology and water resources engineering, structures (structural mechanics and 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), dynamics, fluid mechanics, heat and mass transfer, manufacturing and design, nanoelectromechanical/microelectromechanical systems (NEMS/MEMS), structural and solid mechanics, systems and control

**Graduate Certificate of Specialization**

A Certificate of Specialization is available in all areas, except computer science, offered by HSSEAS. Requirements for admission are the same as for the M.S. 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 doctoral degrees.

**JOHN E. ANDERSON GRADUATE SCHOOL OF MANAGEMENT**

Judy D. Olian, Dean

UCLA

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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 UCLA John E. Anderson Graduate School of Management, 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 School offers the business community a wide range of higher education programs that provide 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.

John E. Anderson Graduate School of Management students come from diverse professional and educational backgrounds and seek equally diverse personal and professional goals. Whether they pursue the professional M.B.A., the academic M.S., or a Ph.D. 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 doctoral levels. These include both an academic (M.S.) and professional (M.B.A.) master's, a Master of Financial Engineering (M.F.E.), as well as an Executive M.B.A. Program designed for working managers who are moving from specialized areas into general management and a three-year Fully Employed M.B.A. Program for emerging managers. The school also offers a part-time dual Executive M.B.A. degree with the National University of Singapore (NUS) Business School that prepares participants for top positions in organizations around the world. A Ph.D. in Management is also offered, as are a certificate Executive Program and research conferences and seminars for experienced managers.

The school also offers an undergraduate minor in Accounting and several undergraduate courses in management. Enrollment in these courses, although open to all University students who have completed the requisites, is limited. The school limits the number of courses taken by undergraduate students to 11.

**Degrees**

The school offers the following degrees, in addition to an undergraduate minor in Accounting:

- Master of Business Administration (M.B.A.)
- Master of Financial Engineering (M.F.E.)
- Master of Science (M.S.)
- Doctor of Philosophy (Ph.D.)

**Concurrent Degree Programs**

The school offers 10 concurrent degree programs:

- Management M.B.A./Computer Science M.S.
- Management M.B.A./Dentistry D.D.S.
- Management M.B.A./Latin American Studies M.A.
- Management M.B.A./Law J.D.
Entrepreneurial Studies Program

Communities. See http://www.harrt.ucla.edu.

ness models. See http://www.anderson.ucla.edu/

transforming entertainment, sports, and media busi-

sponsoring faculty expertise in many areas. See http://www

bridge the gap between real estate research and practice. See http://www.anderson .ucla.edu/ziman.xml.

The Anderson School of Management prepares students to become first-rate managers with specialized skills and a broad understanding of the general economic, business, and managerial environment.

Information Systems Research Program

The Information Systems Research Program (ISRP) was established to recognize the importance of maintaining close ties between the activities of practicing professionals and the activities of academics in the information systems area, while at the same time raising money to support education and research activities in the information systems area. The senior managers and technical professionals who belong to the Information Systems Associates participate in a number of activities to facilitate professional interchange and networking, such as the Information Systems Executive Leadership annual award dinner and the annual Information Systems Associates Symposium. See http://www.anderson.ucla.edu/x1049.xml.

Laurence D. and Lori W. Fink Center for Finance and Investments

The Fink Center for Finance and Investments sponsors research, teaching, and the application of financial knowledge in the global corporate and investment communities. The center takes a leadership role in recruiting and retaining outstanding faculty members and scholars. It also supports promising students in their efforts to gain a deeper understanding of the issues and challenges in the field of finance. See http://www.anderson.ucla.edu/finkcenter.xml.

Office of Executive Education Programs

Lifelong learning plays a critical role in the success of today’s business leaders. The Anderson School’s Office of Executive Education Programs offers more than 40 innovative open enrollment and customized programs that address complex and rapidly changing business issues. The Executive Program covers such diverse areas as strategic planning, organizational design, and competitive positioning. See http://www .anderson.ucla.edu/x24218.xml.

Richard S. Ziman Center for Real Estate

The Richard S. Ziman Center for Real Estate is a joint center of the Anderson School and the UCLA School of Law. It is charged with creating and administering UCLA’s activities surrounding real estate research, education, and professional development. The objectives are to (1) advance the quality of real estate research to a level comparable with financial economics, (2) train highly skilled professionals who use advanced scientific tools for designing new products, managing risk, and raising returns to real estate investments, and (3) undertake activities that bridge the gap between real estate research and practice. See http://www.anderson .ucla.edu/ziman.xml.

Riordan Programs

The Riordan Programs were established by the Riordan Foundation to address the demand for trained managers who can provide vision and leadership in culturally diverse communities. The programs’ success results from the collaborative efforts of Anderson
School faculty members, students, and alumni, and corporate leaders throughout the community. Together these individuals encourage underrepresented students to pursue higher education in management and to become future leaders in business and society. See http://www.anderson.ucla.edu/x257.xml.

**UCLA ANDERSON FORECAST**

Using large-scale econometric models, the UCLA Anderson Forecast makes quarterly and long-term forecasts of the national and California economies, with focus on unemployment and employment by three-digit SIC code. Results of the forecasts are announced at conferences attended by members of the media and leaders in business and government. See http://uclaforecast.com.

**MEYER AND RENE LUSKIN SCHOOL OF PUBLIC AFFAIRS**

Franklin D. Gilliam, Jr., Dean

UCLA
3250 Public Affairs Building
Box 951656
Los Angeles, CA 90095-1656

(310) 206-7568
fax: (310) 206-5773
http://publicaffairs.ucla.edu

The Meyer and Renee Luskin School of Public Affairs educates at the highest level of excellence the next generation of practitioners and academic researchers in the problem-solving professions—public policy, social welfare, and urban planning. The school provides relevant lifelong education in the form of executive education, career training, technical assistance, and public pedagogy. The school also produces outstanding basic and applied policy and practice research and provides balanced and timely policy advice to policymakers in the public, private, and nonprofit sectors.

**DEPARTMENTS**

The school combines 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, engaging people locally, nationally, and internationally.

**DEGREES AND PROGRAMS**

The school offers the following degrees, in addition to undergraduate minors in Public Affairs and in Urban and Regional Studies:

- Public Policy (M.P.P.)
- Social Welfare (M.S.W., Ph.D.)
- Urban and Regional Planning (M.U.R.P.)
- Urban Planning (Ph.D.)

**Concurrent Degree Programs**

The school offers 12 concurrent degree programs:

- Public Policy M.P.P./Law J.D.
- Public Policy M.P.P./Management M.B.A.
- Public Policy M.P.P./Public Health M.P.H.
- Public Policy M.P.P./Social Welfare M.S.W.
- Social Welfare M.S.W./Asian American Studies M.A.
- Social Welfare M.S.W./Law J.D.
- Social Welfare M.S.W./Public Health M.P.H.
- Urban Planning M.U.R.P./Latin American Studies M.A.
- Urban Planning M.U.R.P./Law J.D.
- Urban Planning M.U.R.P./Management M.B.A.
- Urban Planning M.U.R.P./Public Health M.P.H.

Obtain brochures about the school’s programs from the department offices, 3357 Public Affairs Building, or see http://publicaffairs.ucla.edu.

The school also offers a wide array of undergraduate courses in 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 at http://www.gdnet.ucla.edu/gasaa/library/pgmrqintro.htm.

For information on the proficiency in English requirements for international graduate students, see Graduate Admission in the Graduate Study section 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 at http://www.gdnet.ucla.edu/gasaa/library/pgmrqintro.htm.

**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 provide opportunities for student financial aid in the form of research assistant positions, grants, and fellowships.

**Center for Civil Society**
The Center for Civil Society (CCS) is the focal point for the school's programs and activities in nonprofit leadership and management, community organizations and advocacy, international nongovernmental organizations, and philanthropy. The center coordinates teaching of nonprofit and civil society aspects, conducts research, convenes meetings and seminars, offers executive education, and contributes to a policy dialogue about the current and future role of nonprofit organizations, philanthropy, and civil society. See http://www.spa.ucla.edu/ccs/.

**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. See http://www.latinoeconomicsecurity.org/cpra.html.

**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 provide 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. See http://www.its.ucla.edu or http://www.its.ucla.edu.

**Ralph and Goldy Lewis Center**
The Lewis Center 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. See http://www.lewis.ucla.edu.

**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 Meyer and Renee 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. See http://luskin.ucla.edu.

**SCHOOL OF THE ARTS AND ARCHITECTURE**

Christopher Waterman, Dean

UCLA
8260 Broad Art Center
Box 951427
Los Angeles, CA 90095-1427
(310) 206-6465
fax: (310) 206-8504
http://www.spa.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 six departments (Architecture and Urban Design, Art, Design | Media Arts, Ethnomusicology, Music, and World Arts and Cultures/Dance) provide students with unparalleled opportunities to learn from faculty members who rank among the most innovative artists, designers, musicians, 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.

Also under the School of the Arts and Architecture umbrella is an impressive array of public arts units,
including UCLA Live, 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.

The school also includes six interdisciplinary research
centers—the Art | Global Health Center, Art | Sci
Center, Center for Intercultural Performance, CityLab,
Experiential Technologies Center, and Grunwald Cen-
ter for the Graphic Arts—and the renowned Murphy
Sculpture Garden. All of these programs offer students
the opportunity to broaden and deepen their experi-
ence of the arts and architecture while at UCLA.

In addition to providing a rich and diverse environ-
ment on campus, the school offers students the oppor-
tunity 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.

DEPARTMENTS AND PROGRAMS

The six departments of the school are integral to the
rich and varied cultural life of the campus. The
Department of Architecture and Urban Design pro-
vides 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 Department of Art learn to
understand the broad panorama of the visual arts
emphasizing experimentation. The Department of
Design | Media Arts focuses on electronic and digital
imagery in visual communication design. Students in
the Department of Ethnomusicology study the perfor-
mance and context of music-making from a global per-
spective, including a concentration in jazz studies, and
the Department of Music offers concentrations in
composition, music education, and performance. The
Department of World Arts and Cultures/Dance offers
an innovative curriculum focused on the interdisci-
plinary and intercultural investigation of performance,
the arts, and dance, and on establishing connections
between cultural theory and artistic practice.

Information regarding academic programs is available
from the Office of Enrollment Management and Out-
reach, 8260 Broad Art Center, UCLA, Box 951427,
edu, (310) 825-8981.

Students interested in obtaining instructional creden-
tials for California elementary and secondary schools
should consult the Department of Education, 1009
Moore Hall, (310) 825-8328.

DEGREES

The school offers the following degrees, in addition to
an undergraduate interdisciplinary minor in Visual
and Performing Arts Education:

Architectural Studies (B.A.)
Architecture (M.Arch. I, M.Arch. II, M.A., Ph.D.)
Art (B.A., M.F.A.)
Culture and Performance (M.A., Ph.D.)

Dance (M.F.A.)
Design | Media Arts (B.A., M.F.A.)
Ethnomusicology (B.A., M.A., C.Phil., Ph.D.)
Individual Field (B.A.)
World Arts and Cultures (B.A.)

UNDERGRADUATE ADMISSION

In addition to the University of California undergrad-
uate application, departments in the School of the Arts
and Architecture require auditions, portfolios, or evi-
dence of creativity. Information regarding departmental
requirements is available on each department
website; see http://www.arts.ucla.edu (click on Depart-
ments). The annual deadline date for applications is
November 30 for admission in the following Fall
Quarter. 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
meet three types of requirements for the Bachelor of
Arts degree:

1. University requirements
2. School requirements
3. Department requirements

School of the Arts and Architecture Structure of a Degree

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
   Writing I
   Writing II
5. Quantitative Reasoning
6. Foreign Language
7. Upper Division Nonmajor Courses
8. Diversity
9. General Education
   Foundations of Arts and Humanities
   Foundations of Society and Culture
   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 elec-
tives and can be used to meet the minimum unit re-
quirement for graduation.
UNIVERSITY REQUIREMENTS

The University of California has two requirements that undergraduate students must satisfy in order to graduate: (1) Entry-Level Writing or English as a Second Language and (2) American History and Institutions. See Degree Requirements in the Undergraduate Study section for details.

School of the Arts and Architecture students enrolled in English as a Second Language 33A, 33B, 33C, 35 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, scholarship, academic residence, writing, quantitative reasoning, foreign language, upper division nonmajor courses, diversity, and general education.

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 of the Arts and Architecture. No more than 18 of the 35 units may be completed in UCLA Summer Sessions.

Courses in UCLA Extension (either class or correspondence) 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 3H with a grade of C or better (C– or a Passed grade is not acceptable).

The Writing I requirement may also be satisfied by scoring 4 or 5 on one of the College Board Advanced Placement Tests in English or a combination of a score of 720 or higher on the SAT Reasoning Test Writing Section and superior performance on the English Composition 3 Proficiency Examination.

Students whose native language is not English may satisfy the Writing I requirement by completing English as a Second Language 36 with a grade of C or better (C– or a Passed grade is not acceptable). Admission into the course is determined by completion of English as a Second Language 35 with a passing grade or proficiency demonstrated on the English as a Second Language Placement Examination (ESLPE).

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 in the Schedule of Classes at http://www.registrar.ucla.edu/soc/writing.htm and available in the Student Services Office. 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 (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 higher or an SAT Subject Test in Mathematics score of 550 or higher.

Approved courses include Biostatistics 100A, 100B, Mathematics 2 (or any higher numbered 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, 11, 12, 13, 14.

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 at UCLA with a grade of Passed or C 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.

**UPPER DIVISION NONMAJOR REQUIREMENT**

Students are required to complete a minimum of 12 units of upper division (100-level) nonmajor courses. Graduate (200-level) courses may not be applied toward this requirement.

**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, and interpret art. 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 (1) reveals to students the ways that research scholars in the arts, humanities, social sciences, and natural sciences create and evaluate new knowledge, (2) introduces students to the important ideas and themes of human cultures, (3) fosters appreciation for the many perspectives and the diverse voices that may be heard in a democratic society, and (4) 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 a third 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**

<table>
<thead>
<tr>
<th>Area</th>
<th>Requirement</th>
<th>Number of Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Literary and Cultural Analysis</td>
<td>1 Course</td>
<td></td>
</tr>
<tr>
<td>Philosophical and Linguistic Analysis</td>
<td>1 Course</td>
<td></td>
</tr>
<tr>
<td>Visual and Performance Arts Analysis and Practice</td>
<td>1 Course</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>15 units minimum</td>
</tr>
</tbody>
</table>

**Foundations of Society and Culture**

<table>
<thead>
<tr>
<th>Area</th>
<th>Requirement</th>
<th>Number of Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Historical Analysis</td>
<td>1 Course</td>
<td></td>
</tr>
<tr>
<td>Social Analysis</td>
<td>1 Course</td>
<td></td>
</tr>
<tr>
<td>Third course from either subgroup</td>
<td>1 Course</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>15 units minimum</td>
</tr>
</tbody>
</table>

**Foundations of Scientific Inquiry**

<table>
<thead>
<tr>
<th>Area</th>
<th>Requirement</th>
<th>Number of Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life Sciences/Physical Sciences</td>
<td>2 Courses</td>
<td></td>
</tr>
<tr>
<td>Two courses from either subgroup</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>8 units minimum</td>
</tr>
</tbody>
</table>

**Total GE**

8 Courses/38 Units Minimum
nalize, 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 http://www.registrar.ucla.edu/ge/.

Reciprocity with Other UC Campuses
Students who transfer to UCLA from other UC campuses and who 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 Student Services Office, School of the Arts and Architecture, 2200 Broad Art Center, UCLA, 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: (1) Preparation for the Major (lower division courses) and (2) 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 section of this catalog.

THE MAJOR
A major is composed of no less than 56 units, including at least 36 units of upper division courses.

STUDENT RESPONSIBILITY
Students should take advantage of academic support resources, but they are ultimately responsible for keep-
ing 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. 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 Tests.** Credit earned through the College Board Advanced Placement (AP) Tests may be applied toward certain University/school requirements. Consult a counselor in the Student Services Office to determine applicable credit. Portions of AP Test 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.

- **Graduate Courses.** Undergraduate students who wish to take courses numbered in the 200 series for credit toward the 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 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. For counseling information, contact the Student Services Office.
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 at http://www.gdnet.ucla.edu/gasaa/library/pgmrqintro.htm.

For information on the proficiency in English requirements for international graduate students, see Graduate Admission in the Graduate Study section 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 at http://www.gdnet.ucla.edu/gasaa/library/pgmrqintro.htm.

SCHOOL OF DENTISTRY

No-Hee Park, Dean

UCLA
53-038 Dentistry
Box 951668
Los Angeles, CA 90095-1668
(310) 206-6063
fax: (310) 794-7734
http://www.dentistry.ucla.edu

The UCLA School of Dentistry has a national and international reputation for its teaching, research activities, and public service that prepare dental students for professional careers dedicated to patient treatment, leadership, and service. The curriculum prepares students for changes in treatment modalities and health-care 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 selects 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 provides a variety of hands-on courses for members of the dental profession and their auxiliaries.

DEGREES AND PROGRAMS

The school offers the following degrees:
Dental Surgery (D.D.S.)
Oral Biology (M.S., Ph.D.)

In addition, the school has a Professional Program for International Dentists (PPID) and a number of dental specialty residency programs. Articulated D.D.S., M.S., Ph.D., and specialty programs are also available. One concurrent degree program (Dentistry D.D.S./Management M.B.A.) is also offered. For information on the M.S. and Ph.D. programs in Oral Biology, for which admission to the School of Dentistry is not required, see Program Requirements for UCLA Graduate Degrees at http://www.gdnet.ucla.edu/gasaa/library/pgmrqintro.htm.

PREDENTAL CURRICULUM

For details on the three-year predental curriculum, see http://career.ucla.edu/Students/GradProfSchCounseling/Overview.aspx.

D.D.S. DEGREE

The UCLA dental curriculum leading to the degree of Doctor of Dental Surgery (D.D.S.) 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 provide students with clinical competence and broad experience in all phases of clinical dentistry within the four years.

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.

For details on the D.D.S. program and a listing of the courses offered, see http://www.dentistry.ucla.edu :8000/Dentistry/admissions/ or write to the Office of Student Affairs, School of Dentistry, A0-111 Dentistry, UCLA, Box 951762, Los Angeles, CA 90095-1762.

RESIDENT PROGRAMS

School of Dentistry opportunities for resident study include a one-year general practice residency program; a one-year advanced education in general dentistry program; a one-year residency in maxillofacial prosth-
The outstanding reputation of the UCLA School of Law is based on excellence in scholarship, a rigorous educational program, and the quality of a faculty that includes eminent authorities in all major fields of law.

Rachel F Moran, Dean

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By any standard, the UCLA School of Law 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 Universitywide 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, 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 humane 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, Entertainment and Media Law and Policy, 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. An entire wing of the Law Building is designed especially 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, 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, including law firms, corporations, government agencies, and public interest organizations. UCLA graduates (more than 13,000) 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, writers, journalists, law professors, and academic administrators.

DEGREES

The school offers the following degrees:
Juris Doctor (J.D.)
Master of Laws (LL.M.)
Doctor of Juridical Science (S.J.D.)

Concurrent Degree Programs

The school offers nine concurrent degree programs:

Law J.D./Afro-American Studies M.A.
Law J.D./American Indian Studies M.A.
Law J.D./Education M.Ed., M.A., Ed.D., or Ph.D.
Law J.D./Management M.B.A.
Law J.D./Philosophy Ph.D.
Law J.D./Public Health M.P.H.
Law J.D./Public Policy M.P.P.
Law J.D./Social Welfare M.S.W.
Law J.D./Urban Planning M.U.R.P.

In addition to the concurrent programs above, students may design a tailored program from other disci-
plines 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.

**JURIS DOCTOR DEGREE**

**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.

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.

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 at http://www.law.ucla.edu.

**Residence and Unit Requirements**

Candidates for the degree of Juris Doctor must pursue resident law school study for six semesters and successfully complete 87 units. 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 is required to 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, may be obtained from the Office of the Assistant Dean for Students. Standards for satisfactory performance and for graduation are prescribed by the faculty and are published separately. They may also be obtained from the above office.

**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. Additionally, the first-year required course in lawyering skills provides students the opportunity to explore the relationship between legal analysis and lawyering tasks such as legal writing, oral advocacy, research, and client interviewing and counseling.

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 prerequisites for graduation.

**MASTER OF LAWS DEGREE**

The School of Law offers a Master of Laws (LL.M.) 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. For further information, see http://www.law.ucla.edu/llm/.

**DOCTOR OF JURIDICAL SCIENCE DEGREE**

The Doctor of Juridical Science (S.J.D.) degree program is designed for those seeking to pursue careers as
teachers and scholars of law. The highly selective pro-
gram is open only to applicants who possess a distin-
guished 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 J.D. degree or
foreign equivalent and an LL.M. degree (or be enrolled
in a program leading to an LL.M. degree). For further
information, see http://www.law.ucla.edu/sjd/.

ACADEMIC SPECIALIZATIONS

BUSINESS LAW AND POLICY SPECIALIZATION

More than 60 courses and seminars are offered in the
Business Law and Policy specialization. For students
who want to be prepared for transactional practice to
the highest level, the specialization offers an unparal-
leled opportunity by producing lawyers who can com-
bine legal analysis with a thorough understanding of
the business client’s goals and obstacles. In an effort to
help students further hone their area of study, the spe-
cialization offers four tracks that highlight the pro-
gram’s core strengths: business law, bankruptcy, tax
law, and securities regulation.

CRITICAL RACE STUDIES SPECIALIZATION

The UCLA School of Law is the first American law
school to offer an advanced curriculum that fosters stu-
dents’ systematic and rigorous study in the area of crit-
cial race studies. With many faculty members who
have been instrumental in pioneering and advancing
critical race theory, the Critical Race Studies specializa-
tion is essential to promoting insightful, intelligent
public conversation about race relations. It is appropri-
ate 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 cli-
ents 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 (under-
standing 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).

ENTERTAINMENT AND MEDIA LAW AND
POLICY SPECIALIZATION

Los Angeles is the center of the entertainment indus-
try, and recognizing the unique ability to offer a spe-
cific program in that arena, the school launched the
Entertainment and Media Law and Policy specializa-
tion in 2005. The specialization is the most compre-
ssive, 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, 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 non-
profit institutions, government, or academia in the
area of entertainment and media law and policy.

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 philo-
sophical foundations of law. It is invaluable to stu-
dents, especially those interested in attending graduate
programs or exploring a career in academia. The spe-
cialization exposes students to material on the nature
of law and legal systems, legal methodologies, and the
theoretical underpinnings and justifications of particu-
lar 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
and defining public interest broadly to include all
interests underrepresented by the private market, the
Public Interest Law and Policy specialization strives to
provide its students with an innovative and intellectu-
ally 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 competi-
tive 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 rep-
resent 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 perspec-
tives.

PROGRAMS AND CENTERS

BUSINESS LAW AND POLICY PROGRAM

The Business Law and Policy Program is comprised of
some of the most prominent scholars in areas such as
corporate governance, tax law, and bankruptcy. The
innovative research of the faculty members influences
the national legal and policy debate over critical issues
affecting the regulation and governance of business.
Built on the incredible work and scholarship of the fac-
ulty, the program offers students a unique blend of
policy-based and practice-oriented courses designed to
prepare them to be leaders in the new economy. Each
year the program hosts timely conferences and schol-
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 John E. Anderson Graduate School of Management and the law school’s Business Law and Policy Program, 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 Program

With more than 26 diverse clinical offerings, the Clinical Program is widely regarded as one of the strongest in the nation. Housed in a special clinical wing, it provides extensive and rigorous practical training for student-lawyers interested in litigation, transactional, and public interest work. The program is built on two principles: that most legal skills are transferable across practice areas and that such skills are best learned through repetition in increasingly more complex settings. The goal is to provide students with conceptual frameworks that allow them to make reasoned strategic judgments across all substantive areas of law. Students can choose among a wide variety of live-client clinics (in which they represent actual clients) and sophisticated simulation-based courses. In the more than 20 clinical settings, students learn how to interview and counsel clients, draft legal documents, conduct depositions, examine and cross-examine witnesses, resolve disputes, and argue before a judge or jury. Students interested in transactional practice can learn how to finance a start-up company, sell a private company, advise a community-based organization engaged in economic development projects, or manage myriad environmental issues that arise when selling a business.

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 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 has quickly emerged as 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 provides 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 Center on Climate Change and the Environment

The Emmett Center on Climate Change and the Environment is the nation’s first law school center focused exclusively on climate change. It was established in 2008 to tackle the most pressing climate issues and works hand in hand with the Frank G. Wells Environmental Law Clinic and the Evan Frankel Environmental Law and Policy Program. The center engages experts in other UCLA schools, as well as those outside UCLA who are working on matters related to climate change.

Empirical Research Group

The UCLA School of Law is one of the only law schools in the country to provide its faculty members with 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. ERG has received or facilitated more than $2.5 million in foundation support for specific projects, including a grant from the Pew Charitable Trusts to study state campaign finance disclosure.

**ENTERTAINMENT AND MEDIA LAW AND POLICY PROGRAM**

The Entertainment and Media Law and Policy Program supports and expands the curricular offerings of the Entertainment and Media Law and Policy 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 Entertainment Law Review, as well as the student organization, the Entertainment Law Association.

**ENVIRONMENTAL LAW CENTER**

The Environmental Law Center houses the school’s varied and interdisciplinary work related to environmental law and policy. It includes the Frank G. Wells Environmental Law Clinic, which offers excellent opportunities for students to obtain hands-on experience in environmental law, the Emmett Center on Climate Change and the Environment, and the Evan Frankel Environmental Law and Policy Program, as well as the work of UCLA’s world-class environmental law faculty. The center provides opportunities for members of the UCLA community to have a voice in solving the important environmental issues of the twenty-first century and to educate the public about these issues.

**EVAN FRANKEL ENVIRONMENTAL LAW AND POLICY PROGRAM**

The Evan Frankel Environmental Law and Policy Program fosters informed analysis of timely and important issues involving governance and regulation in environmental policy. It supports ongoing work on public policy issues related to environmental governance and regulation through research publications, the timely placement of op-eds in influential mainstream publications, and by bringing together stakeholders and policymakers to work toward solutions to critical environmental problems. The program has recently worked on issues including catastrophe prevention and response, enforcing the California Endangered Species Act, pollution prevention mandates, addressing environmental impacts related to liquefied natural gas, and studying air pollution in microenvironments. Through its interdepartmental work with the UCLA Institute of the Environment, the program also participates in publishing the annual Environmental Report Card.

**EXTERN PROGRAM**

The school has one of the most extensive, best-established, and most diversified student extern programs in the nation. Under supervision of experienced public interest and governmental lawyers and federal judges, students perform legal work in government offices, public interest law firms, nonprofit agencies, and the chambers of federal judges.

In the semester-long program, students develop legal skills in supervised settings and acquire perspectives about the lawyering process or the judicial decision-making process. They also participate in a faculty-led, law school-based seminar in which they reflect systematically in a classroom setting on their experiences in the placement. Students regularly report that the program is an excellent educational experience.

**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 monthly newsletter, organizes conferences, and hosts regular speaker programs. Student contributors are involved in every stage of the project.

**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 international business transactions, national security law, human rights, 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.

**INTERNATIONAL HUMAN RIGHTS LAW PROGRAM**

International human rights touch everything from politics to commerce, security to public health, law enforcement to the environment. In 2008 the UCLA Law School established the first major international human rights law program in Southern California to provide students with opportunities to participate in important human rights activities across the range of clinical work and scholarship. At the core are a clinical program in which students can conduct on-the-ground investigations of international human rights abuses, a research program to frame and address important questions about human rights law, and a public program with regular seminars, workshops, lectures, and films. The International Justice Clinic gives students unique opportunities to participate in the process of holding perpetrators of massive human rights abuses to account.
**LAW AND PHILOSOPHY PROGRAM**

The School of Law and the Department of Philosophy 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.

**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 law clerking for Indian nation clients.

**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 that attracts more than 110 public service employers and some 1,000 students from around the region. Additionally, the office provides support for 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, provided through science and credited as evidence, influence various venues of law and policymaking.

**RICHARD S. ZIMAN CENTER FOR REAL ESTATE**

Reflecting a growing interdisciplinary focus at UCLA, the School of Law formed a partnership in 2005 with the John E. Anderson Graduate School of Management to create the Richard S. 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 provides a holistic view of real estate issues.

**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 LAW AND PUBLIC POLICY**

The Charles R. Williams Institute on Sexual Orientation 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 provides a national center for the interdisciplinary exploration of these issues by scholars, judges, practitioners, advocates, and students.

**SCHOOL OF NURSING**

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The School of Nursing 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 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 Ph.D. 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 healthcare 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 provides 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 the Health Sciences. This action paved the way in 1950 for the opening of an undergraduate generic program in nursing leading to the Bachelor of Science (B.S.) degree and made possible the establishment of a graduate program leading to the Master of Science (M.S.) degree in Nursing in 1951. In 1966 the Master of Nursing (M.N.) degree was established as an alternate option to the M.S. degree. The M.S. degree program was discontinued in 1969. The Regents approved the Doctor of Nursing Science (D.N.Sc.) degree program in 1986, and in 1987 the first doctoral students were admitted. In 1996 the Office of the President and The Regents approved the change in the master's degree designation from M.N. to Master of Science in Nursing (M.S.N.); the change in doctoral degree designation from D.N.Sc. to Ph.D. in Nursing was approved in 1995.

The original generic B.S. program curriculum was revised in 1997 to meet the educational needs of students who are registered nurses with Associate Degrees or diplomas in nursing.

In 2006 the school reinstated a generic/prelicensure B.S. program with admission at the freshman level and launched the master's entry clinical nurse (MECN)/prelicensure program option within the M.S.N. degree program, which is designed for prelicensure students with bachelor's degrees in another discipline. In 2010 the B.S. (Generic/Prellicensure) program was renamed to the B.S. (Prelicensure) program.

All School of Nursing bachelor's and master's programs have Board of Registered Nursing approval. In 2010 the Commission on Collegiate Nursing Education accredited the existing bachelor's and master's degree programs for a term of 10 years.

**DEGREES**

The school offers the following degrees:

- Bachelor of Science (B.S.)
- Master of Science in Nursing (M.S.N.)
- Doctor of Philosophy (Ph.D.)

**Concurrent Degree Program**

The school offers one concurrent degree program:

Nursing M.S.N./Management M.B.A.

**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 healthcare provider, and the larger society, nursing has a social mission that encompasses the right and responsibility to provide leadership in health policy and healthcare 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. B.S. (Prelicensure) students are admitted at the freshman and junior levels. See Nursing in the Curricula and Courses section for additional admission requirements.

The Undergraduate Council of the UCLA Academic Senate has suspended admissions to the B.S. (R.N. to B.S./Postlicensure) program effective Fall Quarter 2011.

UNDERGRADUATE DEGREE REQUIREMENTS

School of Nursing students must meet three types of requirements for the Bachelor of Science degree:

1. University requirements
2. School requirements
3. Major requirements

UNIVERSITY REQUIREMENTS

The University of California has two requirements that undergraduate students must satisfy in order to graduate: (1) Entry-Level Writing or English as a Second Language and (2) American History and Institutions. See Degree Requirements in the Undergraduate Study section for details.

School of Nursing students enrolled in English as a Second Language 33A, 33B, 33C, 35 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, scholarship, academic residence, writing, quantitative reasoning, and general education.

UNIT REQUIREMENT

Students in the Nursing B.S. (Prelicensure) program 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.

Students in the Nursing B.S. (R.N. to B.S./Postlicensure) program must complete with a passing grade a minimum of 180 units. At least 63 of the 180 units must be upper division courses numbered 100 through 199.

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 section 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. Students in the Nursing B.S. (Prelicensure) program must complete 77 of the last 97 nursing course units in residence.

Students in the Nursing B.S. (R.N. to B.S./Postlicensure) program must complete 76 of the last 85 units in residence.
NURSING
SCHOOL OF

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 or 3H, or an equivalent course, with a grade of C or better (C– or a Passed grade is not acceptable).

The Writing I requirement may also be satisfied by scoring 4 or 5 on one of the College Board Advanced Placement Tests in English or a combination of a score of 720 or higher on the SAT Reasoning Test Writing Section and superior performance on the English Composition 3 Proficiency Examination.

Students whose native language is not English may satisfy the Writing I requirement by completing an English Composition 36 or an equivalent course with a grade of C or better (C– or a Passed grade is not acceptable). Admission into the course is determined by completion of English as a Second Language 35 with a passing grade or proficiency demonstrated on the English as a Second Language Placement Examination (ESLPE).

Qualifying examination scores and courses are determined by the school Faculty Executive Committee. Qualifying scores may be viewed on the Office of Undergraduate Admissions and Relations with Schools website. Approved courses are published in the UCLA Schedule of Classes.

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 in the Schedule of Classes at http://www.registrar.ucla.edu/soc/writing.htm and available in the Student Affairs Office. The course 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 courses may also fulfill a GE requirement.

Nursing B.S. (Prelicensure) 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 the Office of Undergraduate Admissions and Relations with Schools accepts as equivalent to those approved by the Faculty Executive Committee.

Approved courses include Biostatistics 100A, 100B, Mathematics 2 (or any higher numbered 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, 11, 12, 13, 14.

Quantitative Reasoning Requirement

Nursing B.S. (Prelicensure) 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 Faculty Executive Committee. Qualifying examinations and scores may be viewed on the Office of Undergraduate Admissions and Relations with Schools website. Approved courses are listed below.

If approved for general education (GE) credit, applicable courses may also fulfill a GE requirement.

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School of Nursing
General Education Requirements

Foundations of the Arts and Humanities

<table>
<thead>
<tr>
<th>Category</th>
<th>Requirement</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Literary and Cultural Analysis</td>
<td>1 Course</td>
<td></td>
</tr>
<tr>
<td>Philosophical and Linguistic Analysis and Practice</td>
<td>1 Course</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1 Course</td>
<td>15 units minimum</td>
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Foundations of Society and Culture

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<tr>
<th>Category</th>
<th>Requirement</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Historical Analysis</td>
<td>1 Course</td>
<td></td>
</tr>
<tr>
<td>Social Analysis</td>
<td>1 Course</td>
<td></td>
</tr>
<tr>
<td>Third course from either subgroup</td>
<td>1 Course</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1 Course</td>
<td>15 units minimum</td>
</tr>
</tbody>
</table>

Foundations of Scientific Inquiry

<table>
<thead>
<tr>
<th>Category</th>
<th>Requirement</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life Sciences</td>
<td>2 Courses</td>
<td></td>
</tr>
<tr>
<td>Physical Sciences</td>
<td>2 Courses</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>4 Courses</td>
<td>18 units minimum</td>
</tr>
</tbody>
</table>

Total GE                          | 10 Courses/48 Units Minimum |

One of the 10 courses may be a GE-approved Writing II course in an appropriate foundational area selected from a list published in the Schedule of Classes and available in the Student Affairs Office.

Preparation for the major courses may overlap with GE foundation courses.
Nursing B.S. (R.N. to B.S./Postlicensure) students must take calculus to fulfill the quantitative reasoning requirement if the required chemistry courses are completed at UCLA.

**GENERAL EDUCATION REQUIREMENTS**

General education (GE) is more than a checklist of required courses. It is a program of study that (1) reveals to students the ways that research scholars in the arts, humanities, social sciences, and natural sciences create and evaluate new knowledge, (2) introduces students to the important ideas and themes of human cultures, (3) fosters appreciation for the many perspectives and the diverse voices that may be heard in a democratic society, and (4) 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.

**Requirements for Prelicensure Students**

**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 prelicensure student support coordinator 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 provide perspectives and intellectual skills necessary to comprehend and think critically about our situation in the world as human beings. In particular, the courses provide 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 [http://www.registrar.ucla.edu/ge/](http://www.registrar.ucla.edu/ge/).

**Intersegmental General Education Transfer Curriculum**

Nursing B.S. (Prelicensure) 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 prelicensure admission and preparation for the major in the Curricula and Courses section.

**Requirements for R.N. to B.S./Postlicensure Students**

Completion of the following prenursing/general education courses with grades of C or better (C– grades are not acceptable) prior to entering UCLA: human anatomy (one course), sociocultural anthropology (one course), humanities (one or more courses), introductory or general microbiology with laboratory (one course), introductory physics (one course or one year of high school physics with laboratory with a grade of B or better), human physiology (one course), introductory psychology (one course), introductory sociology (one course).
In addition, students are required to complete a block of 30 units of credit by examination administered by the Excelsior College Examination Service in Adult Nursing, Fundamentals of Nursing, Maternal and Child Nursing-AD, and Psychiatric/Mental Health Nursing (this lower division credit applies to the Nursing major only).

**MAJOR REQUIREMENTS**

The School of Nursing sets two types of requirements that must be satisfied for the award of the degree: (1) Preparation for the Major and (2) the Major. See the Curricula and Courses section 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.

Nursing B.S. (R.N. to B.S./Postlicensure) students may not enroll in more than four courses per term unless a petition is approved in advance by the assistant dean of Student Affairs.

**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. Petitions must be submitted to and approved by the school or College department or committee in charge of the new major. Admission to the Nursing major 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 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 Tests.** Credit earned through the College Board Advanced Placement (AP) Tests may not be applied toward the general education requirements. Portions of AP Test 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.

**COUNSELING SERVICES**

The School of Nursing gives direction and provides information to interested potential applicants to the B.S. programs through admissions information sessions. The schedule for these sessions, program information, and applications are available at http://nursing.ucla.edu. Applicants may write to the UCLA School of Nursing, Student Affairs Office, 2-137 Factor Building, Box 951702, Los Angeles, CA 90095-1702, call (310) 825-7181, or contact the Student Affairs Office via e-mail at sonsaff@sonnet.ucla.edu.

On entry to the junior year, students are assigned a faculty adviser to aid in planning their total program. Advisers 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 in the School of Nursing, 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**

Latin Honors are awarded at graduation to undergraduate students with superior grade-point averages. The levels of honors and the requirements for each level are: summa cum laude, an overall average of 3.890;
magna cum laude, 3.813; cum laude, 3.684. To be eligible students must have completed at least 98 University of California units for a letter grade. The minimum GPAs required are subject to change on an annual basis. Required GPAs in effect in the graduating year determine student eligibility. See the Schedule of Classes for the most current calculations of Latin honors.

GRADUATE STUDY
The Master of Science in Nursing (M.S.N.) degree program offers licensure 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 nurse (APN)/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, clinical nurse specialist, or nurse administrator. Advanced practice specialties include acute care, family, gerontology, nursing administration, occupational and environmental health, oncology, and pediatrics.

The Ph.D. 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.

ADMISSION
Detailed information about the graduate academic programs offered by the School of Nursing is included in the UCLA School of Nursing Announcement, available from the Student Affairs Office, 2-137 Factor Building.

For information on the proficiency in English requirements for international graduate students, see Graduate Admission in the Graduate Study section of this catalog.

DEGREE REQUIREMENTS
For complete degree requirements, see Program Requirements for UCLA Graduate Degrees at http://www.gdnet.ucla.edu/gasaa/library/pgmrqintro.htm.

SCHOOL OF PUBLIC HEALTH
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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 healthcare, quality of healthcare, and health status.

The UCLA School of Public Health 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 provides unparalleled opportunities for research, teaching, and service. Its location also provides 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.

School of Public Health students can look forward to working with acclaimed public health experts and innovators. Among its 200 faculty members are 15 members of the prestigious Institute of Medicine, three past presidents of the American Public Health Association, and two past and current presidents of the International Epidemiological Association.

The school’s 700 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 35 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 of Public Health 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 Services deals with the organization, financing, delivery, quality, and distribution of healthcare services. The school also administers interdepartmental degree programs in environmental science and engineering and in molecular toxicology.

See the Curricula and Courses section for further information on each department.

DEGREES AND PROGRAMS

The school offers the following degrees, in addition to an undergraduate minor in Public Health:
- Biostatistics (M.S., Ph.D.)
- Environmental Health Sciences (M.S., Ph.D.)
- Environmental Science and Engineering (D.Env.)
- Epidemiology (M.S., Ph.D.)
- Health Services (M.S., Ph.D.)
- Molecular Toxicology (Ph.D.)
- Preventive Medicine and Public Health (M.S.)
- Public Health (M.P.H., M.S., Dr.P.H., Ph.D.)

The M.S. and Ph.D. degrees in Public Health are offered through the Department of Community Health Sciences. New students are not being admitted to the M.S. in Preventive Medicine and Public Health at this time.

Articulated Degree Programs

The school offers two articulated degree programs:
- Public Health M.P.H./Latin American Studies M.A.
- Public Health M.P.H./Medicine M.D.

Concurrent Degree Programs

The school offers eight concurrent degree programs:
- Public Health M.P.H./African Studies M.A.
- Public Health M.P.H./Asian American Studies M.A.
- Public Health M.P.H./Islamic Studies M.A.
- Public Health M.P.H./Law J.D.
- Public Health M.P.H./Management M.B.A.
- Public Health M.P.H./Public Policy M.P.P.
- Public Health M.P.H./Social Welfare M.S.W.

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. Further requirements for international students are explained in the Graduate Study section. See http://www.gdnet.ucla.edu/gasaa/admissions/admissioninfo.html.

Applicants must also submit the application to the centralized Schools of Public Health Application Service (SOPHAS) at http://www.sophas.org. For additional admission requirements, see http://www.ph.ucla.edu/app_checklist.html.

DEGREE REQUIREMENTS

Specific degree requirements vary according to the department and program. Refer to Program Requirements for UCLA Graduate Degrees at http://www.gdnet.ucla.edu/gasaa/library/pgmrqintro.htm.

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 UCLA School of Public Health.

CENTER FOR ADOLESCENT HEALTH PROMOTION

The UCLA/RAND Center for Adolescent Health Promotion 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 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 community service, partnering with ethnically and economically diverse communities in Los Angeles County to identify opportunities for it to provide technical support to community groups for program implementation and assessment. In addition, the center has partnerships with the Los Angeles Unified School District, Los Angeles County Department of Health Services, and other local groups. See http://www.rand.org/health/centers/adolescent.html and http://www.ph.ucla.edu/prc/.

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 envi-
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 a Certificate in Global Health available to students in any of UCLA’s degree-granting graduate and professional programs. See [http://www.healthpolicy.ucla.edu](http://www.healthpolicy.ucla.edu).

**CENTER FOR HEALTH POLICY RESEARCH**

The 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: (1) to conduct research on national, state, and local health policy issues, (2) to provide public service to policymakers and community leaders, and (3) to offer educational opportunities for graduate students and postdoctoral fellows.

Sponsored by the School of Public Health and the Luskin School of Public Affairs, the center provides 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. See [http://www.healthpolicy.ucla.edu](http://www.healthpolicy.ucla.edu).

**CENTER FOR METABOLIC DISEASE PREVENTION**

The Center for Metabolic Disease Prevention brings the best science to bear on the challenge of controlling the global epidemic of metabolic diseases and provides leadership in metabolic disease prevention through interdisciplinary research, improving patient care, and creating educational initiatives for students, health professionals, and the public. This pioneering center is one of the first in the nation to integrate laboratory-based and population-based sciences in studying mechanisms and strategies for metabolic diseases prevention. In doing so, the center unifies the many strengths and expertise of UCLA’s departments and schools to investigate all facets of metabolic diseases and provides comprehensive multidisciplinary education and research training opportunities for students ranging from sick molecules to sick populations. For more information about the center’s Burroughs Wellcome Fund Interschool Training Program in Metabolic Diseases and other programs, see [http://www.cmdp.ucla.edu](http://www.cmdp.ucla.edu) and [http://nutrigen.ph.ucla.edu](http://nutrigen.ph.ucla.edu).

**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 provides 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 the Health Sciences and involves the Schools of Public Health, Medicine, and Nursing. Specific COEH programs within the 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. See http://www.coeh.ucla.edu.

**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. See http://www.cphd.ucla.edu.

**Division of Cancer Prevention and Control Center Research**
The Division of Cancer Prevention and Control Center Research (DCPCR) is a joint program of the School of Public Health and the David Geffen School of Medicine's Jonsson Comprehensive Cancer Center. Since its inception in 1976, the DCPCR has been a recognized center of cancer prevention and control research at UCLA, throughout the Los Angeles community, and nationally. The DCPCR conducts rigorous peer-reviewed research in two major program areas—the Healthy and At-Risk Populations Program (http://www.ph.ucla.edu/hs/healthy.html) and the Patients and Survivors Program (http://www.ph.ucla.edu/hs/patients.html).

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-environment interaction, tobacco control, nutrition and exercise, and breast, cervix, prostate, and colon cancer screenings, as well as risk counseling and genetic testing of high-risk populations. The Patients and Survivors Program has as its major goal the reduction in avoidable morbidity and mortality among adult and pediatric patients with cancer and long-term survivors of cancer. See http://www.ph.ucla.edu/hs/prev_control.html or http://www.cancer.ucla.edu/Index.aspx?page=122.

**Southern California NIOSH Education and Research Center**
The Southern California NIOSH Education and Research Center (ERC) is one of 16 multidisciplinary centers in the U.S. supported by the National Institute for Occupational Safety and Health for education and research in the field of occupational health. The center is administratively housed in the Department of Environmental Health Sciences and supports academic programs in occupational medicine at UCLA and UCI, occupational health nursing, and industrial hygiene at UCLA.

For these programs the center provides student support (fees and stipends for U.S. citizens or permanent residents) and infrastructure support. The center supports approximately 40 graduate students in the field of occupational health. It also supports a continuing education and outreach program, hazardous substances training for hazardous waste workers and industrial hygiene students, and a Pilot Project Research Training Program for ERC trainees. The continuing education program is primarily for professionals in the occupational health field and covers many topics in industrial hygiene, occupational health nursing, occupational medicine, occupational safety, ergonomics, and environmental areas. See http://www.ph.ucla.edu/erc/.

**Southern California Particle Center and Supersite**
The Southern California Particle Center and Supersite (SCPCS) was established in 1999 through funding from the U.S. Environmental Protection Agency (EPA) and California Air Resources Board (ARB) to study the nature and health effects of airborne particulate matter (PM). The SCPCS is one of five particulate research centers awarded grants as part of an EPA effort to learn more about the health problems caused by exposure to particle pollution. Based in the School of Public Health and the Institute of the Environment, the center includes faculty members from throughout UCLA, as well as researchers from the University of Southern California, University of California campuses at Riverside and Irvine, California Institute of Technology, and Rancho Los Amigos Medical Center.

The major objective of the SCPCS is to identify and conduct the highest priority research for PM to ensure protection of the public health. The center seeks to better determine the sources of particulate pollution, probe the chemical nature of particles, and investigate the health effects of breathing particulates. The SCPCS has created a structure to ensure integration of research and to create a research dynamic where findings facilitate new research that deepens understanding of the mechanisms of particle-related toxicity. See http://www.scpacs.ucla.edu.

**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. See http://healthequity.ucla.edu.

SCHOOL OF THEATER, FILM, AND TELEVISION

Teri E. Schwartz, Dean

UCLA
102 East Melnitz Building
Box 951622
Los Angeles, CA 90095-1622

(310) 825-5761
fax: (310) 825-3383
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 UCLA Live, Geffen Playhouse, and UCLA Film and Television Archive, the school provides 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 M.A. and Ph.D. 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 100 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 C.Phil. and Ph.D. 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 330 graduate and 75 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 M.A. and Ph.D. 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 M.A. and Ph.D. 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. M.A. and Ph.D. faculty members and students also participate in various campus organized research units.

Students interested in obtaining instructional credentials for California elementary and secondary schools should consult the Department of Education, 1009 Moore Hall, (310) 825-8328.

DEGREES
The school offers the following degrees, in addition to undergraduate minors in Film, Television, and Digital Media and in Theater:
- Film and Television (B.A., M.A., M.F.A., C.Phil., Ph.D.)
- Individual Field (B.A.)
- Moving Image Archive Studies (M.A.)
- Theater (B.A., M.A., M.F.A.)
- Theater and Performance Studies (C.Phil., Ph.D.)

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 http://www.tft.ucla.edu. The annual deadline date for applications is November 30 for admission in the following Fall Quarter.

UNDERGRADUATE DEGREE REQUIREMENTS
School of Theater, Film, and Television students must meet three types of requirements for the Bachelor of Arts degree:
1. University requirements
2. School requirements
3. Department requirements

UNIVERSITY REQUIREMENTS
The University of California has two requirements that undergraduate students must satisfy in order to graduate: (1) Entry-Level Writing or English as a Second Language and (2) American History and Institutions. See Degree Requirements in the Undergraduate Study section for details.

School of Theater, Film, and Television students enrolled in English as a Second Language 33A, 33B, 33C 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, scholarship, academic residence, writing, foreign language, literature, and general education.

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). No more than 8 units of freshman seminars and/or 8 units of 300-level courses may be applied toward the degree. 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.

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 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.

School of Theater, Film, and Television Structure of a Degree

<table>
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<th>University Requirements</th>
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<td>1. Entry-Level Writing or English as a Second Language</td>
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<td>2. American History and Institutions</td>
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<th>School Requirements</th>
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<tr>
<td>Foundations of Arts and Humanities</td>
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<td>Foundations of Society and Culture</td>
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<th>Department Requirements</th>
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<td>1. Preparation for the Major</td>
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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.
No more than 18 of the 35 units may be completed in UCLA Summer Sessions.

Courses in UCLA Extension (either class or correspondence) 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 or 3H with a grade of C or better (C– or a Passed grade is not acceptable).

The Writing I requirement may also be satisfied by scoring 4 or 5 on one of the College Board Advanced Placement Tests in English or a combination of a score of 720 or higher on the SAT Reasoning Test Writing Section and superior performance on the English Composition 3 Proficiency Examination.

Students whose native language is not English may satisfy the Writing I requirement by completing English as a Second Language 36 with a grade of C or better (C– or a Passed grade is not acceptable). Admission into the course is determined by completion of English as a Second Language 35 with a passing grade or proficiency demonstrated on the English as a Second Language Placement Examination (ESLPE).

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 in the Schedule of Classes at http://www.registrar.ucla.edu/soc/writing.htm and available in the Student Services Office. The course must be completed with a grade of C or better (C– or a Passed grade is not acceptable).

A Writing II course used to meet this requirement may not be applied toward a foundational area under general education or toward the literature 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.

**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 French, German, 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 at UCLA with a grade of Passed or C or better.

For transfer students from California community colleges, completion of the Intersegmental General Education Transfer Curriculum (IGETC) does not fulfill the school foreign language requirement. Students need to complete level three or above of a foreign language course at the community college with a grade of Passed or C or better to complete the requirement.

**LITERATURE REQUIREMENT**

Three courses (12 units minimum) in literature are required, at least one of which must be upper division. A school-approved literature course taken in the original language can fulfill this requirement. A list of courses that satisfy the requirement is available in the Student Services Office. A course taken to meet the Writing II requirement may not also be applied toward the literature requirement.

**GENERAL EDUCATION REQUIREMENTS**

General education (GE) is more than a checklist of required courses. It is a program of study that (1) reveals to students the ways that research scholars in the arts, humanities, social sciences, and natural sciences create and evaluate new knowledge, (2) introduces students to the important ideas and themes of human cultures, (3) fosters appreciation for the many perspectives and the diverse voices that may be heard in a democratic society, and (4) 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 not also be applied toward a GE requirement.

Courses listed in more than one category can fulfill GE requirements in only one of the cross-listed categories. GE courses may not be applied toward major 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 provide perspectives and intellectual skills necessary to comprehend and think critically about our situation in the world as human beings. In particular, the courses provide 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 (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 http://www.registrar.ucla.edu/ge/.

Reciprocity with Other UC Campuses

Students who transfer to UCLA from other UC campuses or who change their major from another UCLA school or College 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 Director of Student Services, School of Theater, Film, and Television, 103 East Melnitz Building, UCLA, 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 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 Theater, Film, and Television GE requirements.

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: (1) Preparation for the Major (lower division courses) and (2) 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 section of this catalog.

THE MAJOR

A major is composed of no less than 56 units, including at least 36 units of upper division courses. The Theater major includes both lower and upper division
courses. Those listed under Preparation for the Major (lower division) must be completed before upper division major work is undertaken. The Film and Television major requires upper division work only.

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 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 student Study List must include 12 to 19 units. The school has no provision for part-time enrollment. After the first term, students may petition to carry 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. The petitions must be filed and approved by the Student Services Office no later than the end of the third 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. 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 Tests. Credit earned through the College Board Advanced Placement (AP) Tests 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.

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 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.

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 further counseling information, contact the Student Services Office, School of Theater, Film, and Television, 103 East Melnitz Building, (310) 206-8441.

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

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 and the requirements for each level are summa
cum laude, an overall average of 3.942; magna cum laude, 3.886; cum laude, 3.828. The minimum GPAs required are subject to change on an annual basis. Required GPAs in effect in the graduating year determine student eligibility. See the Schedule of Classes for the most current calculations of Latin honors.

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, the requirements in preparation for the major, and eligibility to participate in the school 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. Contact the Student Services Office in 103 East Melnitz Building for details.

GRADUATE STUDY

The advanced degree programs offered in the School of Theater, Film, and Television provide 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 the University’s exhibition and performance halls.

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 at http://www.gdnet.ucla.edu/gasaa/library/pgmrqintro.htm.

For information on the proficiency in English requirements for international graduate students, see Graduate Admission in the Graduate Study section 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 at http://www.gdnet.ucla.edu/gasaa/library/pgmrqintro.htm.
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 and undergraduate programs are posted online in the catalog updates pages at [http://www.registrar.ucla.edu/catalog/updates/](http://www.registrar.ucla.edu/catalog/updates/). For the most current course offerings by term, see the Schedule of Classes at [http://www.registrar.ucla.edu/schedule/](http://www.registrar.ucla.edu/schedule/).

For a complete outline of graduate degree requirements, see Program Requirements for UCLA Graduate Degrees available on the Graduate Division website at [http://www.gdnet.ucla.edu/gasaaa/library/pgmrqintro.htm](http://www.gdnet.ucla.edu/gasaaa/library/pgmrqintro.htm).

**Undergraduate Course Numering**

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 requisites 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**

Fiat Lux freshman seminars (numbered 19) are taught by faculty in areas of their expertise. They introduce freshmen to topics of intellectual importance and enable them to participate in critical discussion of these topics with a small group of peers. The seminar series takes its name from the motto of the University of California: *Fiat Lux—Let There be Light!*

Sophomore seminars (numbered 88) are departmentally sponsored courses designed to provide sophomores 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 graduate school. Many be taken along with a tutorial course in the 195-199 series.

**Upper division tutorial courses (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.

**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 M.A., M.S., and Ph.D. These courses may not be used to satisfy minimum graduate course requirements for the M.A. or M.S. degree but may apply as electives.

Individual study and research 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 section of this catalog.
African Studies
Interdepartmental Program
College of Letters and Science

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Allen F. Roberts, Ph.D. (French and Francophone Studies, World Arts and Cultures/Dance)
Dominic R. Thomas, Ph.D. (Comparative Literature, French and Francophone Studies)
Katrína D. Thompson, Ph.D. (Applied Linguistics)

Scope and Objectives
The basic objective of the African Studies Program is an intellectual one — to provide interested students with the opportunity to engage in intensive study and research on Africa on an interdisciplinary basis. The program offers high quality African area courses in a wide range of fields, including the social sciences, humanities, and professional fields. A concurrent degree program is also offered where students can work sequentially for the M.A. in African Studies and the Master of Public Health (M.P.H.).

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.

The program also offers the undergraduate African Studies minor that is designed primarily for students who plan to live and work in Africa or who are interested in government and public service careers involving African affairs. Students who plan to pursue graduate work related to Africa are also encouraged to add the minor to their major field of study.

Undergraduate Study
African Studies Minor
The African Studies minor offers students an interdisciplinary curriculum in the humanities and social sciences through which they can explore the histories, languages, arts, cultures, literatures, politics, societies, economies, and other issues relevant to Africa.

To enter the minor, students must be in good academic standing (overall grade-point average of 2.0 or better) and have completed all preparation requirements for the minor with a minimum grade-point average of 2.0 in those courses. After satisfying the preparation requirements, students may declare the minor on consultation with the academic counselor.

Required Lower Division Courses (9 to 10 units): Two courses selected from African Languages 1A, 7A, 11A, 31A, 41A, 61A, Afrikaans 40, Art History 55A, Ethnomusicology 20B, History M10A, 10B (or 10BH or 10BW), 97J, Honors Collegium 10, 24.


No more than two upper division courses may be applied toward both this minor and major or minor in another department or program.

Each minor course must be taken for a letter grade, and students must have a minimum grade-point average of 2.0 in all preparation courses for the minor and 2.0 in all upper division minor courses. Successful completion of the minor is indicated on the transcript and diploma.

Study in Africa
African Studies minors are highly encouraged to study abroad in Africa. Students can travel to Africa through a variety of programs with various lengths (summer or during the academic year). More information about travel abroad programs is available through the UCLA International Education Office. B300 Murphy Hall, (310) 825-4995, ieo@international.ucla.edu. See http://www.ieo.ucla.edu.

Graduate Study
Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://www.gdnet.ucla.edu/gasaalibrary/pgmintro.htm. 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 (M.A.) degree in African Studies. A concurrent degree program (African Studies M.A./Public Health M.P.H.) is also offered.

African Studies Upper Division Course

Graduate Courses

201B. Africa and Profession. (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.

M229B. Africana Bibliography and Research Methods. (4) (Same as Information Studies M229B) Discussion, four hours. Problems and techniques of research methodologies related to Africana studies. Emphasis on relevant basic and specialized reference materials, using full range of available information resources, including library collections of books, serials, and computerized databases. S/U or 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 M.A. 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 M.A. Thesis. (4) Tutorial, to be arranged. Limited to graduate African studies students. Normally taken only during term in which student intends to complete M.A. thesis. May not be applied toward minimum graduate course requirement. S/U grading.
AFRO-AMERICAN STUDIES

Interdepartmental Program
College of Letters and Science

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Mark Q. Sawyer, Ph.D., Chair

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Antronette K. Yancey, M.D., Ph.D. (Health Services)
Richard A. Yarborough, Ph.D. (English)

Scope and Objectives

The Afro-American Studies Interdepartmental Program offers a Bachelor of Arts degree, an undergraduate Afro-American Studies minor, a Master of Arts degree, and a concurrent degree program (Afro-American Studies M.A./Law J.D.). A major or minor in this field provides a broadening of cultural experiences and perspectives for those seeking more information about African Americans and the African diaspora. Career-wise, all students profit from Afro-American studies courses in an era when employers and academic institutions are actively seeking those with multicultural and interdisciplinary skills and backgrounds.

The fundamental goal of the Afro-American Studies curriculum is to provide students with a comprehensive and multidisciplinary introduction to the crucial sociocultural and social justice issues facing African Americans and their counterparts in other areas of the African diaspora today. The curriculum is designed to meet this goal in two primary ways. First, it provides an interdisciplinary exposure to particular features of the African American experience. Core courses offer an in-depth understanding of historical, anthropological, sociological, psychological, economic, and political aspects of African America. The curriculum also provides opportunities to study the literary, musical, and artistic heritage of peoples of African descent. Second, students analyze key issues through additional courses that bring to bear concepts, theories, and methods of traditional academic disciplines in areas such as cultural analysis and production, social justice, and public policy. Students may also do individualized study with a professor and/or an internship for course credit.

Undergraduate Study

Afro-American Studies B.A.

The Afro-American Studies B.A. program is periodically revised; check with the program office for changes and updates.

Preparation for the Major

Required: History M10A and the courses listed in one of the following concentrations, plus three courses from at least two additional concentrations (courses for the concentrations must be completed before enrolling in a given course): this is especially important for the quantitative courses in economics and psychology:

- Anthropology — Anthropology 7, 8, 9, 12; economics — Economics 1, 2, Mathematics 3A, 31E (or 3A and 3B, or 31A and 31B); English — English Composition 3, English 4W, 10A, 10B, 10C (all must be taken in sequence); history — History 1A, 1B, 1C, 10B, 13A, 13B, 13C, and one course from 97A through 970 or 100; philosophy — Philosophy 4, 21, 22, 31; political science — Economics 1, Political Science 6, 20, 40, Sociology 1; psychology — Anthropology 7, Mathematics 2, Physics 10 (or 1A or 6A), Psychology 100A, 100B, one year of high school chemistry (or Chemistry and Biochemistry 2 or 20A); sociology — Afro-American Studies M5 or Anthropology 34, Anthropology 9, Mathematics 2, Sociology 1. Students are strongly urged to complete the required lower division courses within the first two years of the major.

Transfer students

Transfer applicants to the Afro-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 of the following: American studies courses in the department of concentration selected from the approved courses listed below; (2) two upper division electives outside the department of concentration selected from the approved courses list.

Students may petition the committee that administers the degree program to have a course not on the approved list accepted for the major. In arranging a course of study, students should select a combination of courses that best meets their current and future educational and career goals. They must maintain an overall 2.0 grade-point average in all courses taken.

Approved courses (recommended courses are indicated by an asterisk):


English Composition 131A through 131D, 136A, 136B, 136C


Double Major Option
Some students elect to complete the requirements of both the Afro-American Studies major and one other major. Students interested in this option must maintain good academic standing and complete both majors within the unit maximum imposed by the College. Some courses used to satisfy the requirements for the principal major may also be used to satisfy the requirements for the secondary major, but no more than five courses may be common to both majors. Because of the complexity of the double major, students are encouraged to plan their curriculum early and to do so in consultation with the College counselors and the Afro-American Studies Program student affairs officer.

Honors Program
Afro-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 under the guidance of an Afro-American Studies faculty member. For more information, contact the student affairs officer of the Afro-American Studies Program.

Afro-American Studies Minor
The Afro-American Studies minor is designed for students who wish to augment their major program of study with courses from various disciplines germane to Afro-American studies. The minor exposes students to African American studies-related coursework, research, and literature in a number of disciplines, such as anthropology, economics, English, history, political science, and sociology.

To enter the minor, students must be in good academic standing (2.0 grade-point average), have completed 45 units, and file a petition in the program office, 153 Haines 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 Courses (9 units): Afro-American Studies M5 and 6, with grades of C or better.


A minimum of 20 units applied toward the minor requirements must be in addition to units ap-
plied toward major or minor requirements in an-
other department or program, 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; con-
sult 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 a minimum grade of C (2.0) in each and an overall grade-
point average of 2.0 or better. Successful com-
pleton of the minor is indicated on the tran-
script and diploma.

Graduate Study
Official, specific degree requirements are de-
tailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://www.gdnet.ucla.edu/gasaa/library/pgmqrintro.htm. In many cases, more detailed guidelines may be outlined in an-
nouncements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees
The Afro-American Studies Program offers the Master of Arts (M.A.) degree in Afro-American Studies. A concurrent degree program (Afro-
American Studies M.A./Law J.D.) is also o-
fered.

Afro-American Studies
Upper Division Courses
M5. Social Organization of Black Communities. (5)
(Same as Sociology M5.) Lecture, four hours; discus-
sion, one hour; field trips. Analysis and interpretation of social organization of black communities, with focus on origins and development of black communities, competing theories and research findings, defining characteristics and contemporary issues. Letter grad-
ing.

6. Trends in Black Intellectual Thought. (4) Lec-
ture, three hours; discussion, one hour. Overview of major intellectual trends that have shaped ways in which Afro-American thinkers have interpreted experi-
ences 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 Histo-
ry M10A.) Lecture, three hours; discussion, one hour. Exploration of development of African societies from earliest times to late 18th century. P/NP or letter grad-
ing.

Upper Division Courses
100B. Psychology from Afro-American Perspec-
tive. (4) Lecture, three hours. Survey of psychological literature relevant to Afro-Americans, with emphasis on contributions of Afro-American psychologists. Topics include history of psychology, testing and intelligence, family, personality and motivation, racism and race rel-
ations, education, community psychology, and future of Afro-American psychology. P/NP or letter grading.

100C. Creative Writing Workshop: Poetry. (4) Lec-
ture, three hours. Weekly exercises in poetry writing and criticism. Study of techniques. Classroom discus-
sion based on work produced by students. P/NP or let-
er grading.

M102. Culture, Media, and Los Angeles. (6) (Same as Asian American Studies M160 and Honors Collegi-
um M102.) Lecture; four hours; screenings, two hours. Designed for juniors/seniors. Role of media in society and its influence on contemporary cultural environ-
ment, specifically in Los Angeles; issues of representa-
tion as they pertain to race, ethnicity, gender, and sexuality. P/NP or letter grading.

M103A. African American Theater History: Slavery to Mid-1800s. (4) (Same as Theater 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 art-
ists in America from slavery to mid-1800s. Letter grad-
ing.

M103B. African American Theater History: Min-
strel Stage to Rise of American Musical. (4) (Same as Theater M103B.) Lecture, three hours. Designed for juniors/seniors. Exploration of extant materials on his-
tory and literature of theater as developed and per-
formed by African American artists in America from minstrel stage to rise of African American musical. Letter grad-
ing.

M103E. African American Theater History: Depres-
sion to Present. (4) (Same as Theater M103E.) Lec-
ture, three hours. Designed for juniors/seniors. Explo-
ration of extant materials on history and literature of theater as developed and performed by African Ameri-
Can artists in America from Depression to present. Let-
ter grading.

M104A. Early African American Literature. (5)
(Same as English M104A.) Lecture, four hours; discus-
sion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Introductory survey of Afri-

can American literature from 18th century through World War I, including oral and written forms (folktales, spirituals, sermons, fiction, poetry, essays), by authors such as Phillis Wheatley, Frances Harper, Frederick Douglas, Harriet Jacobs, Charles Chesnutt, Booker T. Washington, and Pauline Hopkins. P/NP or letter grad-
ing.

M104B. African American Literature from Harlem Renaissance to 1960s. (5) (Same as English M104B.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Compo-
sition 3 or 3H. Introductory survey of 20th-century Afri-
fic American literature from New Negro Movement of post-World War I period to 1960s, including oral mate-

tials (ballads, blues, speeches) and fiction, poetry, and essays by authors such as Jean Toomer, Claude McK-
ay, Langston Hughes, Nella Larsen, Zora Neale Hur-
ston, Richard Wright, Ann Petry, James Baldwin, Gwendolyn Brooks, and Ralph Ellison. P/NP or letter grad-
ing.

M104C. African American Literature of the 1960s and 1970s. (5) (Same as English M104C.) Lecture, four hours; discussion, one hour (when scheduled). En-
forsed requisite: English Composition 3 or 3H. Intro-
ductive survey of African American literary expression from late 1950s through 1970s. Topics include rise of Black Arts Movement of 1960s and emergence of black women's writing in early 1970s, with authors such as Lorraine Hansberry, Amiri Baraka, Nikki Giovanni, Alice Walker, Toni Morrison, Ishmael Reed, Audre Lorde, Paule Marshall, and Ernest Gaines. P/NP or letter grading.

M104D. Contemporary African American Litera-
ture. (5) (Same as English M104D.) Lecture, four hours; discussion, one hour (when scheduled). En-
forsed requisite: English Composition 3 or 3H. Intro-
ductive survey of African American literature from 1980s to present covering range of genres, with em-
phasis on diversity of perspectives and styles that have emerged over past 30 years or so. Authors may in-
clude Toni Morrison, August Wilson, Octavia Butler, Anna Deavere Smith, June Jordan, Charles Johnson,
Pulitzer, August Wilson, Octavia Butler, Anna Deavere Smith, June Jordan, Charles Johnson,
Afro-Futurism, and African American satire. May be repeated for credit with topic or instructor change. P/NP or letter grading.

M107. Cultural History of Rac. (5) (Same as Ethnomusicology M1119.) Lecture, four hours; discussion, one hour. Introduction to development of race music and hip-hop culture, with emphasis on musical and verbal art forms, and survival of sociopolitical ideologies, gender representation, and influences on cinema and popular culture. P/NP or letter grading.

M108. Women in Jazz. (4) (Same as Ethnomusicology M1120.) Lecture, four hours; discussion, one hour. Focus on African American music in jazz, and political and social music and gender representation, and influences on cinema and popular culture. P/NP or letter grading.

M109. Women's Rights Movements. (4) (Same as History M143.) Lecture, four hours; discussion, one hour. Historical examination of the growth of the women's rights movement and the impact of women on society. P/NP or letter grading.

M110A-M110B. American Musical Heritage. (5-5) (Formerly numbered CM110A-CM110B.) (Same as Ethnomusicology M110A-M110B.) Lecture, four hours; discussion, one hour. Historical and cultural analysis of the development of American musical heritage, including African American music, and its impact on American society. P/NP or letter grading.

M112A. African American Music in California. (4) (Same as Ethnomusicology CM112.) Lecture, four hours; discussion, one hour. Historical and cultural examination of the development of African American music in California, including its impact on American society. P/NP or letter grading.

M112B. African American Art. (4) (Same as Art History CM112D.) Lecture, three hours. Historical and cultural examination of African American art, including African American art in Los Angeles. P/NP or letter grading.

M112C. Imaging Black Popular Culture. (4) (Same as Art History CM112F.) Lecture, three hours. Critical examination of the impact of African American painting and sculpture on popular culture. P/NP or letter grading.

M114C. African American Political Thought. (4) (Same as Political Studies M114C and Political Science M180A.) Lecture, three or four hours; discussion, one hour (when scheduled). Historical and cultural examination of African American political thought, including political thought and major trends in Western thought. P/NP or letter grading.

M114D. African American Freedom Narratives. (4) (Same as Political Science M180B.) Lecture, three or four hours; discussion, one hour (when scheduled). Historical, psychological, and thematic interpretation of selected narratives and storytelling in African American culture and politics. P/NP or letter grading.

M114E. Malcolm X and Black Liberation. (4) (Same as Political Science M180C.) Lecture, three or four hours; discussion, one hour (when scheduled). Historical and cultural examination of African American political thought, including political thought and major trends in Western thought. P/NP or letter grading.

M118. Student-Initiated Retention and Outreach Issues in Higher Education. (4) (Same as American Studies M118, Asian American Studies M168, and Chicana and Chicano Studies M118.) Lecture, four hours. Exploration of issues in outreach and retention 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.

M120. Race, Inequality, and Public Policy. (4) (Same as Public Policy M120.) Lecture, three hours. Historical and cultural 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.

M159P. Constructing Race. (4) (Same as Anthropology M159P and Asian American Studies M159.) Lecture, three hours. Historical and cultural 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.

M166. Investigative Journalism and Communities of Color. (4) (Same as Asian American Studies M166.) Lecture, three hours. Historical and cultural 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.

M150D. Recent African American Urban History: Funk Music and Politics of Black Popular Culture. (4) (Same as History M150D.) Lecture, three hours; discussion, one hour (when scheduled). Historical and cultural 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.

M150E. Investigative Journalism and Communities of Color. (4) (Same as Art History M150E.) Lecture, three hours. Historical and cultural 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.

M159P. Constructing Race. (4) (Same as Anthropology M159P and Asian American Studies M159.) Lecture, three hours. Historical and cultural 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.


M165. Sociology of Race and Labor. (4) (Same as Labor and Workplace Studies M165 and Sociology M165.) Lecture, three hours. Historical and cultural 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.
in efforts to improve their wages and working conditions. Impact of globallization on these dynamics. P/NP or letter grading.

M166. Afro-American Sociolinguistics: Black English. (4) (Same as Anthropology M145.) Lecture, three hours. Basic information on Black American English, important minority dialect in U.S. Social implications of minority dialects examined from perspectives of their origin, evolution, maintenance, and social functions. General problems and issues in fields of sociolinguistics examined through case study approach. Letter grading.


M182C. Culture, Communications, and Human Development Ethnography (2) (Same as Education M182C.) Fieldwork, three hours. Enforced corequisite: course M194C. Students visit after-school site on weekly basis in immigrant community. Development of individual and collective organizing. 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 Education M183A.) Fieldwork, six hours. Enforced corequisite: course M194A. Students visit after-school site on weekly basis in immigrant community. Development of individual and collective organizing. 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 Education M183B.) Fieldwork, six hours. Enforced corequisite: course M194B. Students visit after-school site on weekly basis in immigrant community. Development of individual and collective organizing. Opportunity for students to connect theories of development and language and literacy learning with practice. Letter grading.

M185C. Culture, Communications, and Human Development Ethnography (2) (Same as Education M185C.) Fieldwork, six hours. Enforced corequisite: course M194C. Students visit after-school site on weekly basis in immigrant community. Development of individual and collective organizing. Letter grading.

188A. Special Courses in Afro-American Studies. (4) (Formerly numbered 188.) Seminar, four hours. Program-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.

188B. Race and Public Policy. (5) Seminar, three hours. Exploration of range of public policies concerned with promoting civil rights of racial minorities, with focus on education, voting, and housing. Why did such policies initially arise? How have they since developed? How effective have they in closing racial gap? Provides students with basic foundation of knowledge for thinking through contemporary debates surrounding policies and their impact in the United States. P/NP or letter grading.

1919. Variable Topics Research Seminars: Afro-American Studies. (4) Seminar, four hours. 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.

194B. Culture, Gender, and Human Development Research Group Seminars (5) (Same as Education M194B.) Seminar, three hours; laboratory, two hours (when scheduled). Enforced corequisite: course M182A 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 gender. May be taken independently for credit. Letter grading.

194C. Culture, Communications, and Human Development Research Group Seminars (5) (Same as Education M194C.) Seminar, three hours; laboratory, two hours (when scheduled). Enforced corequisite: course M182C or M183C. 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.

195C. Community or Corporate Internships in Afro-American Studies. (4) Tutorial, four hours. Preparation: 3.0 grade-point average in major. Limited to junior/senior majors. Internship in supervised setting in community agency or business. Development of professional skills and refinement 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 multicultural and multiracial campaigns for workplace and economic justice. Transnational cross-border solidarity issues and rights of undocumented workers. P/NP or letter grading.

M172. Afro-American Woman in U.S. (4) (Same as Psychology M172.) Lecture, three hours, discussion, one hour. Enforced corequisite: course M194C. Topics in women's studies examined from historical, political, and theoretical perspectives. Focus on interdisciplinary relationships of Afro-American women as members of large society and as members of their biological and ethnic group. P/NP or letter grading.

M173. Nonviolence and Social Movements. (4) (Same as Chicana and Chicano Studies M173 and Labor and Workplace Studies M173.) Lecture, two and one-half hours, discussion, one hour. Overview of nonviolence 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 history and contemporary society. Examination of particular lessons of nonviolent movements as they impact social change organizing in Los Angeles. P/NP or letter grading.

M178. Sociology of Caribbean. (4) (Same as Sociology M178.) Lecture, three hours, discussion, one hour. Limited to juniors/seniors. Historical sociology of Caribbean, with emphasis on colonialism and decolonization, development and historical processes toward shifting institutions and evolution of race relations, nationalism and migration. P/NP or letter grading.

M179A. Topics in African American Literature. (5) (Same as English M191A.) Seminar, three hours or six hours. Enforced corequisite: English Composition 3 or 3H. Variable specialized studies course in African American literature. Topics may include Harlem Renaissance, African American literature in the Caribbean, 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.

179B. Special Studies in Comparative Literature: Caribbean Literature. (4) Seminar, three hours. General introduction to literature of English-speaking Caribbean by reviewing its historical and geographical background, gaining knowledge of its evolution toward self-determination in literature, following topics are included: (1) alienation and search for community, (2) external relationships (ancestor, kinsman, other), and (3) form and language. P/NP or letter grading.

M182A. Language, Literacy, and Human Development Ethnography (2) (Same as Education M182A.) Fieldwork, three hours. Enforced corequisite: course M194A. Students visit after-school site on weekly basis and use ethnographic 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 Education M182B.) Fieldwork, three hours. Enforced corequisite: course M194B. Students visit after-school site on weekly basis and use ethnographic methods to document learning. Opportunity for students to connect theories of development and language and literacy learning with practice. Letter grading.

M185C. Culture, Communications, and Human Development Ethnography (2) (Same as Education M185C.) Fieldwork, six hours. Enforced corequisite: course M194C. Students visit after-school site on weekly basis and use ethnographic methods to document learning. Opportunity for students to connect theories of development and language and literacy learning with practice. Letter grading.

M194A. Language, Literacy, and Human Development Ethnography (2) (Same as Education M194A.) Seminar, three hours; laboratory, two hours (when scheduled). Enforced corequisite: course M182A 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 Education 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 gender. May be taken independently for credit. Letter grading.

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M200A. Advanced Historiography: Afro-American. (4) (Same as History M260V.) Seminar, three hours. May be repeated for credit. S/U or letter grading.

M200B. Seminar: Political Economy of Race. (4) Seminar, three hours. Seminar on political economy, with special reference to black political economy and with focus on dynamics of allocation of wealth and power resources among social classes and racial and ethnic groups in U.S. Presented in context that is at once comparative and international, seminar emphasizes internationalism and its implications for uniqueness of Afro-American condition. Attempts to relate black condition in U.S. to socioeconomic system of this country and to compare it to political, social, and economic conditions of African peoples elsewhere. S/U or letter grading.

M200C. Selected Problems in Urban Sociology. (4) (Same as Sociology M262B.) Seminar, three hours. S/U or letter grading.

M200D. Afro-American Sociolinguistics: Black English. (4) (Same as Anthropology M243Q.) Lecture, three hours. Basic information on Black American English, one important minority dialect in U.S. Social implications of minority dialects examined from perspectives of their origin, evolution, maintenance, and social functions. General problems and issues in fields of sociolinguistics examined through case study approach. Students required to conduct research in consultation with instructor and participate in group discussion. S/U or letter grading.

M200E. Studies in Afro-American Literature. (4) (Same as English M262.) Lecture, four hours. Intensive study and study of faculty members. Enforced corequisite: course M182C or M183C. Reading, discussion, and development of culminating project. May be repeated for credit. S/U or letter grading.

M200F. African American Psychology. (4) Seminar, three hours. Survey of psychological literature as it pertains to persons of African American descent. Critical analysis of implications of research on African Americans, including discussion of research on family, academic achievement, and psychological as-
American Indian Studies / 127

Scope and Objectives
Because UCLA possesses a substantial num-
ber of faculty members in the humanities and
social sciences engaged in teaching and con-
ducting research on American Indians, the na-
tion’s first interdisciplinary M.A. program in
American Indian Studies was established here.
The Bachelor of Arts degree and the under-
graduate American Indian Studies minor pro-
vide a general introduction for students who an-
ticipate advanced study at the graduate level in
American Indian studies, ethnic studies, and
the traditional disciplines or careers in re-
search, administration, public service, and
community service related to American Indian
communities.

The Master of Arts program draws primarily
on existing courses in the participating depart-
ments, where research and research methodol-
gies are of primary importance. Students are ex-
posed 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 or to serve in an administrative capacity
in Indian programs or organizations. The M.A.
program ranks among the top Indian studies
programs in the country.

Undergraduate Study
American Indian Studies B.A.
The American Indian Studies B.A. program
is designed to offer a coherent and comprehen-
sive curriculum in American Indian cultures,
styles, and contemporary issues in addition to
valuable background in more traditional disci-
plines such as anthropology, art history, eco-
nomics, education, history, law, linguistics, lit-
erature, sociology, and world arts and cultures.
Students acquire a critical knowledge of the
concepts, theories, and methods that have pro-
duced knowledge about American Indians in
the traditional disciplines. Students are encour-
aged to develop a concentration — or special
expertise — in these fields to accomplish the
major.

The curriculum encompasses the cultural, his-
torical, political, and social experiences of Na-
tive Americans in the Americas. Through
courses on Native American literature, lan-
guages, theater, and contemporary societies
and through more culturally specific courses on
California Indians, cultures of the Pueblo south-
west, and so on, the major provides an in-depth
and broad knowledge on the experience of Na-
tive 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 knowl-
edge of American Indian studies greatly en-
hances the professional and scholarly contribu-
tions attainable for those seeking postgraduate
degrees in various related disciplines and fields.

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Linda C. Garro, Ph.D. (Anthropology)
Misra R. Giri, Ph.D. (Women’s Studies)
Carole E. Goldberg, J.D. (Law)
Felicia S. Hodge, Dr.P.H. (Health Services, Nursing)
Paul V. Kroskrt, Ph.D. (Anthropology)
Peter Nabokov, Ph.D. (World Arts/Literatures/Art/Dance)
Nancy Reifel, D.D.S., M.P.H. (Dentistry)
Angela R. Riley, J.D., ex officio (Law)

by instructors and invited guests form basis for super-
vised evaluation and case management with African

241. Special Topics in Afro-American Studies. (4)
Lecture, four hours; discussion, one hour. Intensive re-
search and studio of major themes and issues in vari-
ous areas of Afro-American studies. S/U or letter grad-
ning.

252S. Constructing Race. (4) Same as Anthropol-
ogy M252S.) Seminar, three hours. Examination of so-
cial construction of race from anthropological perspec-
tive in order to refine understanding of ways this cate-
gory has had and continues to have concrete impact in
U.S. Exploration of range of topics, including role disci-
pline of anthropology has played in construction of race,
reproduction of race in popular culture, inaccessi-
bility of race revealed in passing and debates about
multiracial identity, construction of whiteness, and
emergence of identity politics. S/U or letter grading.

256. Topics in African American Art. (4) (Same as
Art History M256.) Seminar, three hours. Prerequisite:
course CM112D or CM121E or CM112F. Topics in Afri-
can 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 re-
ports from faculty on introduction to re-
search in and related to Afro-American studies and
ap-
lication of such research. Letter grading.

271. Variable Topics in Afro-American Studies.
(Same as Art History M271.) Seminar, three hours.
Requisite:
course CM112D or CM121E or CM112F. Topics in Afri-
can American art from 18th century to present. May be
repeated for credit with consent of graduate adviser. S/
U or letter 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
courses. S/U or letter grading.

597. Preparation for M.A. Comprehensive Exami-
nation. (4 or 8) Tutorial, to be arranged. Limited to
graduate students. May not be applied toward M.A. course
requirements. S/U grading.

598. Research for and Preparation of M.A. Thesis.
(4 or 8) Tutorial, to be arranged. Limited to graduate
students. May not be applied toward M.A. course re-
quirements. S/U grading.
Preparation for the Major

Required: American Indian Studies M10 and two courses from Anthropology 9, Political Science 40, Statistics 12, Women's Studies 10. 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 American politics, introduction to statistical methods, and introduction to women's studies.

Refer to the UCLA Transfer Admission Guide at http://www.admissions.ucla.edu/prospect/adm_tr.htm 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 provides 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 M161, (b) two language courses from Anthropology M140, C144, 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 CM168P, 172A, or 174P, (e) two expression culture courses from American Indian Studies 180, Art History C117A through C117D, 118D, English 106, Ethnomusicology 106A, 106B, Theater 103F, 107, (f) one methodology course from Anthropology 139, M186, 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/gender relations course (Afro-American Studies M164, Anthropology M134, 152, M154P, M154Q, Asian American Studies 130A, M130B, M130C, 131A, 132A, 133, 134, Chicana and Chicano Studies M182, Communication Studies M124, Film and Television 128, Sociology 154, 156, M162, Women's Studies 130, or 168) or one comparative indigenous studies course (Anthropology 153P, Geography M131, History 135A, or Sociology 157).

2. American Indian Studies C121 and C122SL (experiential service learning or supervised internship)

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.

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, 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

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 communications system course (Anthropology C144 or Linguistics 114); (2) three history and social sciences courses from American Indian Studies C120, C121, C122SL, C130, 140, 158, C170, C175, C178, Anthropology 113Q, 113R, 114P, 114Q, 114R, 158, 172R, History 149A, 149B, 157B, Sociology M161, Women's Studies 130; (3) three humanistic perspectives on language and expressive culture courses from American Indian Studies 180, Art History C117A, C117B, C117C, 118D, 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 or minor requirements in another department or program, 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 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 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, http://www.gdnet.ucla.edu/gasas/library/pgmgrintro.htm. 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 (M.A.) degree in American Indian Studies. A concurrent degree program (American Indian Studies M.A./Law J.D.) is also offered.

American Indian Studies

Lower Division Course

M10. Introduction to American Indian Studies. (5) (Same as World Arts and Cultures M23.) Lecture, three hours; discussion, one hour; activity, one hour. Survey of selected Native North American cultures from pre-Western contact to contemporary period, with particular emphasis on early cultural diversity and diverse patterns of political, linguistic, social, legal, and cultural change in postcontact period. P/NP or letter grading.
Upper Division Courses

M118. Student-Initiated Retention and Outreach Issues and Strategies Education. (4) (Same as Afro-American Studies M118, Asian American Studies M168, and Chicana and Chicano Studies M118.) Lecture, four hours. Exploration of issues in outreach and retention of marginalized student populations. Students are mentored and student-initiated programs, efforts, activities, and services, with focus on UCLA as case. May be repeated twice for credit. Letter grading.

C120. 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 cultural and social processes of indigenous nations. Concurrently scheduled with course C220. Letter grading.

C220SL. Working in Tribal Communities: Service Learning Seminar. Lecture, seminar, and fieldwork, four hours. Enrolled requisite: course C121. Recommended: course C120. Participation in community service learning project within Native American communities and organizations. 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 for credit. Consent of instructor. Concurrently scheduled with course C220SL. Letter grading.

C130. California Indian Strategies for Contemporary Challenges. (4) Seminar, three hours. Through readings, discussion, and Native guest lectures, introduction to fundamental concepts and history of federal Indian law and policy. Investigation of contemporary policies and legal issues and exploration of Native responses to policy and law. Letter grading.

C145. Contemporary Indigenous Nations. (4) Seminar, four hours. Discussion of topics on contemporary indigenous nations, including social movements, social and cultural change and continuity, nation building, law and justice relations, economic development, education, 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 can give greater understanding and knowledge about current conditions and social and cultural processes of indigenous nations. Concurrently scheduled with course C245. Letter grading.

158. Nation Building. (4) Lecture, four hours; fieldwork, 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 tribes. Current developments within indigenous nations, including restructuring government, developing economies, and asserting cultural sovereignty to be subject of research, study, and required community-based fieldwork.


M162. Language Endangerment and Linguistic Revitalization. (4) (Same as Anthropology M162.) Lecture, three hours; activity, one hour. Requisites: course M10, Anthropology 33. Examination of causes and consequences of current worldwide linguistic diversity and revelation of kinds of efforts that members of threatened heritage language communities have produced in their attempt to revitalized 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 attempts are made to preserve and sustain them. Prescription of some effective strategies that have been attempted, including immersion, language and culture classes, master-apprentice, intergenerational, individual, and new media methods. Evaluation of effectiveness of these measures and of very imagery used to discuss language endangerment. P/NP or letter grading.

C168P. Perspectives on Health of Native North Americans. (4) (Same as Anthropology CM168P.) Seminar, three hours. Recommended preparation: some knowledge of medical anthropology and/or history and current literature about peoples of North America. Examination of different perspectives related to health and healthcare of Native North Americans (within present United States and Canada) in relation to cultural, social, political, and economic aspects of changing historical context. Concurrently scheduled with course CM268P. P/NP or letter grading.

C170. California Indian History. (4) Lecture, four hours. Introduction to overview of California Indian history, specific tribal community histories, and/or contemporary California Indian history through readings, discussion, and Native guest lecturers. May be repeated for credit with topic change and consent of instructor. Concurrently scheduled with course C270. Letter grading.

C175. Cultures of Native Southern California. (4) Lecture, three hours. Introduction to Southern California indigenous societies through readings, discussion, guest lecturers, and direct community participation. May be repeated for credit with topic change and consent of interdepartmental chair. Concurrently scheduled with course C270. Letter grading.

C176. Contemporary American Indian Literatures. (4) Lecture, four hours. Variable topics selected from American Indian literatures, including autobiography, fiction, drama, poetry, and criticism, with emphasis on important issues facing American Indians as individuals, communities, and American society. May be repeated for credit with topic change and consent of instructor. Letter grading.

C195. Community Internships in American Indian Studies. (2 to 4) Tutorial, three hours. Limited to juniors/seniors. Individual intensive study, with scheduled meetings to be arranged between faculty member and student. Assigned readings and tangible evidence of mastery of subject matter required. May be repeated for maximum of 16 units. Individual contract required. P/NP or letter grading.

C198-198B-198C. Honors Research in American Indian Studies. (4-4-4) Tutorial, one hour; activity, three hours. Course 198A is enrolled requisite to 198B, which is enrolled requisite to 198C. Limited to senior honors program participants in research 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.

C199. Directed Research or Senior Project in American Indian Studies. (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

M200A. Advanced Historiography: American Indian Peoples. (4) (Same as History M200W.) Lecture, 90 minutes; seminar, 90 minutes. 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 M200B.) Lecture, 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 and tribal contexts that 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 Indians. (4) (Same as Anthropology M269 and Sociology M275.) Seminar, three hours. Introduction to most important issues facing American Indians as individuals, communities, tribes, and nations. May be repeated for credit. Consent of instructor. Letter grading.

201. Topics in American Indian Studies. (4) Discussion, three hours. S/U or letter grading.

M202. Qualitative Research Design and Methodology for Indigenous Communities. (5) (Same as Health M202.) Lecture, 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 communities, languages, and other issues. Quantitative methods (design, appropriate use), with emphasis on qualitative research methods, ethics, and special considerations in American Indian Policy. Consult Schedule of Classes for topics and instructors. May be repeated twice 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. Designed to integrate theory and practice through experiential learning to gain firsthand knowledge of diversity, coping, and viability of American Indian communities. May be repeated for maximum of 8 units. Individual contract with supervising faculty member required. P/NP or letter grading.

197. Individual Studies in American Indian Studies. (2 to 4) Tutorial, three hours. Limited to juniors/seniors. Individual intensive study, with scheduled meetings to be arranged between faculty member and student. Assigned readings and tangible evidence of mastery of subject matter required. May be repeated for maximum of 16 units. Individual contract required. P/NP or 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, Native guest lecturers, and project participation, introduction of rules of conduct and skills necessary for carrying 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.

M228A-228B. Tribal Legal Systems. (1 to 8 each) (Formerly numbered M228A-228B.) Lecture, two hours. Course M228A is enforced requisite to 228B. Study of traditional and 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 relationship between tribes’ legal systems and other aspects of their cultures, such as religion and social structure. Independent research paper with focus on contemporary or historic topic required. In Progress (M228A) and S/U or letter (228B) grading.


M238A-238B. Tribal Legal Development Clinic. (1 to 8 each) (Formerly numbered M238A-238B.) Lecture, two hours. Course M238A is enforced requisite to 238B. Students provide pro bono legal assistance to Indian nations. Projects include development and modification of tribal legal codes and constitution 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 availability of clinical services and determine whether clinical assistance might be provided. Services provided non-cost to tribe with consent of tribe. Students are expected to attend clinically oriented lectures and meetings. Students are expected to carry out component with travel funds supplied. Students learn about tribal government and legal systems, including federal constraints on activities of tribal legal institutions, and culture of tribe they are representing to be able to craft legislation and other documents that meet tribal intentions and needs. In Progress (M238A) and S/U or letter (238B) grading.

C245. 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 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 change. Concurrently scheduled with course C145. S/U or letter grading.

561. 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 cultural continuity within indigenous nations, primarily of U.S., but also elsewhere. Discussion of theories of change, comparative methodologies, and case materials. Letter grading.

M265A-265B. Federal Indian Law I. (1 to 8 each) (Formerly numbered M265A-265B.) Lecture, three hours. Course 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 recognized under U.S. law, federal trust responsibility, and equal protection issues posed by federal rules and statutes singling 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.

M267A-267B. Federal Indian Law II. (1 to 8 each) (Same as Law M382.) Lecture, three hours. Required: courses M228A and 238B, or M265A and 265B. Course M267A is cross-listed with 2570. 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.

CM268P. Perspectives on Health of Native North Americans. (4) (Same as Anthropology CM268P) Seminar, three hours. Recommended preparation: some knowledge of anthropology and historical and contemporary situation of peoples of North America. Examination of different perspectives related to health and healthcare of Native North Americans (within present boundaries of U.S. and Canada) in relation to cultural, social, political, and economic aspects of changing historical context. Concurrently scheduled with course CM168P. S/U or letter grading.

C270. California Indian History. (4) Lecture, four hours. Introduction to overview of California Indian history, specific tribal communities, and contemporary California Indian history through readings, discussion, and Native guest lecturers. May be repeated for credit with topic change and consent of interdepartmental chair. Concurrently scheduled with course C170. S/U or letter grading.

C275. Cultures of Native Southern California. (4) Lecture, three hours. Introduction to Southern Californian indigenous societies through readings, discussion, guest lecturers, and direct community participation. May be repeated for credit with topic and/or instructor change and consent of interdepartmental chair. Concurrently scheduled with course C175. S/U or letter grading.

C278. California Experiences in Native Cultural Resource Management. (3) Lecture, 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 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 C178. 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.


ANESTHESIOLOGY

David Geffen School of Medicine

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http://www.anes.ucla.edu

Chairs
Patricia A. Kapur, M.D. (Ronald L. Katz, M.D., Endowed Professor of Anesthesiology), Chair Randolph H. Steadman, M.D., Vice Chair, Education Enrico Stefani, Ph.D., M.D. (John Bartley Dillon, M.D., Endowed Professor of Anesthesiology), Vice Chair, Research
Barbara M. Van de Weile, M.D., Vice Chair, Clinical Affairs

Scope and Objectives

The medical student program in anesthesiology focuses on the delivery of peri-operative care to surgical patients. During their training in the department, students develop clinical skills of medical management of surgical patients, techniques of invasive line and monitor placement, and airway management skills. They are assigned to work with a specific 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 simulated 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 further details on the Department of Anesthesiology and a listing of the courses offered, see http://www.anes.ucla.edu.
Anthropology

College of Letters and Science

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P. Jeffrey Brantingham, Ph.D., Vice Chair

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Robert Boyd, Ph.D.
Carole H. Browner, Ph.D., in Residence
Alessandro Duranti, Ph.D.
Alan Page Fiske, Ph.D.
Linda C. Garro, Ph.D.
Marjorie Harness Goodwin, Ph.D.
Akhil Gupta, Ph.D.
Sondra Halle, Ph.D.
Douglas W. Hollan, Ph.D.
Paul V. Kroskrity, Ph.D.
Nancy E. Levine, Ph.D.
Joseph H. Manson, Ph.D.
Claudia I. Mitchell-Kernan, Ph.D.
Elinor Ochs, Ph.D.
Sherry B. Ortner, Ph.D.
Susan E. Perry, Ph.D.
Dwight W. Read, Ph.D.
Joan B. Silk, Ph.D.
Susan E. Szymomovics, Ph.D.
Charles S. Stanish, Ph.D.
Mariko Tamano, Ph.D.
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Yunxiang Yan, Ph.D.

Emeriti
Nicholas G. Blurton Jones, Ph.D.
Karen B. Brodkin, Ph.D.
Christopher B. Donnan, Ph.D.
Robert B. Edgerton, Ph.D. (University Professor Emeritus)
Peter B. Hammond, Ph.D.
Allen W. Johnson, Ph.D.
Lewis L. Langness, Ph.D.
Jacques Maquet, Ph.D.
Michael Moerman, Ph.D.
Philip L. Newman, Ph.D.
Wendell H. Oswalt, Ph.D.
Merrick Posnansky, Ph.D.
Douglas R. Price-Williams, Ph.D.
James R. Sackett, Ph.D.
Johannes Wilbert, Ph.D.
Bobby Joe Williams, Ph.D.

Associate Professors
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P. Jeffrey Brantingham, Ph.D.
Jessica R. Cattelino, Ph.D.
Daniel Fessler, Ph.D.
Gail E. Kennedy, Ph.D.
Richard G. Leslie, Ph.D.
Kyeyoung Park, Ph.D.

Assistant Professors
Min Li, Ph.D.
Brooke A. Scoetza, Ph.D.
Gregson T. Schachner, Ph.D.
C. Jason Throop, Ph.D.

Adjunct Assistant Professors
Robert B. Lemelson, Ph.D.
Tritia Toyota, Ph.D.

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 present and past, human and animal behavior, particular regions of the world such as Africa, Asia, Latin America, Oceania, etc.

The department recognizes the following four fields in anthropology:

Archaeology is 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 evolutionary psychology.

Linguistic anthropology is an interdisciplinary field that addresses the manifold ways in which language, interaction, and culture mutually organize each other in different communities worldwide. Linguistic anthropologists at UCLA have a variety of backgrounds and research interests that include face-to-face 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 Southeast 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 Ph.D. 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 B.A.

Preparation for the Major

Required: Anthropology 7, 8, 9, 33. 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 B.A. 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.

Refer to the UCLA Transfer Admission Guide at http://www.admissions.ucla.edu/prospect/adm_tr.htm for up-to-date information regarding transfer selection for admission.

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 ap-
Anthropology proach with many fields, such as biology, history, linguistics, the social sciences, and many of the humanities.

To provide 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 region and society course, (3) one upper division history/theory course, (4) one upper division methodology course, and (5) three 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.

Concentrations for the Major

Concentrations, although not required, may help define and structure an Anthropology major when students want emphasis in one of the four major fields. Whether or not they opt for a concentration, the requirements for the major still must be satisfied. It is possible to use courses within their specified concentration to fulfill overlapping requirements for the major. Exceptions to the requirements below are by petition only. More detailed information on the concentrations is available from the undergraduate adviser.

Archaeology: Two courses from Anthropology 110P, 111, 113P; two field or laboratory methods courses from 115P, 117, 117P, 117Q; one methods course from C115R or 129Q; one quantitative methods course — M186; two area courses from 112, 113P, 113Q, 113R, 114L, 114P, 114Q, 114R, C114S, 114T, M115A, M115B, M115C, 114T, 119P; one theory course from 120, 124A, 150, 152, 153, 153P, 156, 158, 185A, 185B, or 186P.

Biological Anthropology: Anthropology 120; one quantitative methods course — M186; one methods course from 115P, 117, 117P, 117Q, or 143; one human biology and behavioral ecology course from 124A, 185A, 185B, or 186P; one paleoanthropology course from 121A, 121B, 121C, or both 121 and 129Q (credit is not granted for both courses 7 and 12); one human genetics course from Ecology and Evolutionary Biology 135 or Molecular, Cell, and Developmental Biology CM156; one primate behavior course from Anthropology 128A, 128B, or Ecology and Evolutionary Biology 129.

Linguistic Anthropology: Anthropology 33, M140, Linguistics 20, Sociology M124A; two methods courses from Anthropology 141, 142A, 143, Linguistics 103; one ethnography course from Anthropology C144, M145, 146, or Linguistics 114; one course from Anthropology 133Q, 133R, 135A, 135B, 135C, Communication Studies 100, Linguistics 110, or 127; one term of a non-European language.

Sociocultural Anthropology: Anthropology 130, 150; one primary course from three of the four subconcentrations listed below; two history, theory, and methods courses from 139, 182, 186, Sociology 101; one region and society course from M154Q, 158, 171, 172A, 172B, 172R, 173Q, 174P, 175Q, 175R, 175S, 175T, 175U, 175V, 176, or 177; two additional courses from one of the subconcentrations listed below:

2. Ecological and Evolutionist Subconcentration: Primary course: Anthropology 153; additional courses: 128A, 128B, 158, M186, 186P, Geography 140
4. Psychocultural and Medical Subconcentration: Primary courses: Anthropology 135A, 135B, 135C, 135T; additional courses: 135S, M168

Anthropology B.S.

Preparation for the Major

Required: Anthropology 7, 8, 9, 33; Chemistry and Biochemistry 14A, 14B, 14BL, 14C, and 14CL, or 20A, 20B, 20L, 30A, and 30AL; Life Sciences 1, 2, 3, 4; Mathematics 3A, 3B, and 3C, or 31A and 31B; Physics 6A, 6B, and 6C, or 6AH, 6BH, and 6CH; Statistics 12. 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 B.S. 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 cultural 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.

Refer to the UCLA Transfer Admission Guide at http://www.admissions.ucla.edu/prospect/adm_tr.htm for up-to-date information regarding transfer selection for admission.

The Major

The major provides 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 (archaeology, biological anthropology, and linguistic anthropology), (2) one upper division region and society course, (3) one upper division history/theory course, 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.

Honor 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 (archaeology, biological anthropology, linguistic 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 7 or 12, 8, 9, 33.

Required Upper Division Courses (20 units minimum): Core course (Anthropology 111, 120, 130, M140, or 150) 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.
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, http://www.gdnet.ucla.edu/gassaid/gradpgmreq.htm. 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 (M.A.) and Doctor of Philosophy (Ph.D.) degrees in Anthropology.

Anthropology

Lower Division Courses

7. Human Evolution. (5) Lecture, three hours; discussion, one hour; field trip. Students are prepared for both bachelor's degrees. Evolutionary processes and evolutionary past of human species. P/NP or letter grading.

8. Archaeology: Introduction. (5) 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 techniques of scientific archaeology. Archaeological method and theory with emphasis on what archaeologists do and how and why they do it. Consideration of field strategies, stratigraphy, chronological frameworks, and other crucial principles of archaeological analysis and interpretation. P/NP or letter grading.

CM110Q. Introduction to Archaeological Sciences. (4) Same as History CM189L. Lecture, three hours. Basic understanding of newly introduced methods and techniques throughout field of archaeology to implement them and to appreciate and evaluate results of their use by others who have embedded them within the whole of their research. 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 CM210Q. P/NP or letter grading.

111. Theory of Anthropological Archaeology. (4) Lecture, three hours. Required: course 8. Method and theory with emphasis on archaeology within context of anthropology. Themes include theoretical developments, methods of archaeological reasoning, and selective survey of work on problems of general anthropological interest. P/NP or letter grading.


113P. Archaeology of North America. (4) Lecture, three hours. Prehistory 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 social/cultural organization. Historic impacts on Californians by Euro-Americans. P/NP or letter grading.

113R. Southwestern Archaeology. (4) Lecture, three hours. Examination of prehistory of American Southwest from 11,000 years ago to historic times. Emphasis on describing and explaining cultural variation and change, employing evolutionary perspective. Special attention to advent of farming and settled towns, large-scale interactive networks, abandonment of Four Corners area, and historic cultures. P/NP or letter grading.

114L. Archaeology of Chiefdoms. (4) Seminar, three hours. Enforced requisite: course 8. Examination of chiefdom societies in anthropological record, with readings focusing on the concepts from archaeological, historical, and ethnographic literature. Illustration of how people in ranked non-state societies created remarkably rich cultures over entire globe beginning several millennia ago in both Old World and Americas. Letter grading.

114P. Ancient Civilizations of Mesoamerica. (4) Lecture, three hours. Archaeology of pre-Hispanic native cultures in central structure of ice-age Late Pleistocene through Spanish conquest, with emphasis on formative sociopolitical developments, classic period civilizations, and Aztec society as revealed by archaeology and early Spanish writing. P/NP or letter grading.

114Q. Topics in Archaeology of Mesoamerica. (4) Lecture, three hours. Designed for juniors/seniors. Specialized consideration of particular regions or topics in archaeology of pre-Hispanic Mesoamerica. Specific topics vary but include archaeology and ethnohistory, ancient Mesoamerican religions, Olmec art and archaeology, and Maya studies.

114R. Ancient Civilizations of Andean South America. (4) Lecture, three hours. Required: course 8 or 9. Pre-Hispanic and Conquest period native cultures of Andean South America, as revealed by archaeology and early Spanish writings. Emphasis on cultures and peoples in Peru, with emphasis on sociopolitical systems, economic patterns, religion, and aesthetic and intellectual achievements. P/NP or letter grading.

C114S. Comparative Study of Ancient States. (4) Lecture, three hours. Comparative anthropological study of first complex societies in Near East, Mesoamerica, and Andes, including early Egyptian, Uruk, Teotihuacan, classic Mesoamerica, with focus on political and economic structures of these societies and on causes of state development and collapse. Concurrently scheduled with course CM214S. P/NP or letter grading.

114T. Moche Civilization of Ancient Peru. (4) Lecture/demonstration, three hours. Required: course 114R. Moche civilization, which flourished on north coast of Peru between A.D. 100 and 800, as revealed by archaeology, iconography, ethnography, and early Spanish writing. Emphasis on Moche aesthetic, technological, and artistic achievements. Letter grading.

M115A-M115B. Historical Archaeology. (4) Same as History M102A-M102B. Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. P/NP or letter grading. M115A. World Perspective. Historical archaeology requires appreciation of historical sources, archaeology, and material culture. Thematic emphasis, with exploration of breadth of discipline both in Old World and Americas. M115B. American Perspective. Emphasis on historical archaeology in North America, particularly to some practical applications.

115P. Archaeological Field Training. (6 or 13) Lecture, two to three hours; fieldwork, to be arranged (nine hours minimum for 6 units; 13 hours minimum for 13 units). Required: course 8. Off-campus field archaeology course offered in either regular session or summer. Procedures of archaeological excavation, record-keeping, surveying, and initial analysis of archaeological data. P/NP or letter grading.


C115R. Strategy of Archaeology. (4) Seminar, three hours. Designed for juniors/seniors. Introduction to problem formulation, theory, and method in archaeology, with emphasis on development of research design. Focus on how archaeological research is conceived and planned, with consideration of differing viewpoints and their usefulness. Concurrently scheduled with course C215R. Letter grading.

116. Archaeology of South Asia. (4) 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 50 hours minimum is interpreted in present. P/NP or letter grading.


M116S. Archaeological Landscapes of China. (4) Same as C116S. P/NP or letter grading, three hours; discussion, one hour. Declassified space images from Cold War era and open remote sensing data of 21st century provide new opportunities for studying landscape transformation. 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 var-
Archaeological Laboratory Methods. (6) Lecture, three hours; laboratory, two to three hours. Requisite: course 8. Introduction to archaeological analysis of range of prehistoric cultural materials. Procedures of classification, seriation, and typology; use of hand tools. Introduction to lithic analysis, ceramic analysis, analysis of body ornament, and study of prehistoric social groups. Histo.

Archaeological Laboratory Topics in Archaeology. (4) Lecture, three hours. Requisite: course 8. How archaeological research is furthered by specialized analysis of certain aspects of cultural remains. Topics may include pottery, bone tools, ceramics, rock art. Hands-on experience working with collections and data. May be repeated for credit with topic change. P/NP or letter grading.

Intensive Laboratory Training in Archaeology. (6) Lecture, three hours; laboratory, two to three hours. Requisite: course 8. Archaeologists with special expertise in specific analytical techniques and topics oversee intensive laboratory training on one of following topics: zooarchaeology, human skeletal remains, lithics, ceramic analysis, etc. May be repeated for credit with topic change. P/NP or letter grading.

Selected Topics in Archaeology. (4) Lecture, three hours. Requisite: two courses in cultural anthropology. Consult Schedule of Classes for topics and instructors. May be repeated for credit with topic change. P/NP or letter grading.

Biological Anthropology

Survey of Biological Anthropology. (4) Lecture, three hours. Requisite: course 7. Limited to majors and graduate anthropology students. Survey of biological anthropology including all major subareas. (Core course for biological field.) P/NP or letter grading.

Primate Fossil Record. (4) Lecture, three hours. Requisite: course 7 or 12. Introduction to primate evolution, Cretaceous through Miocene. May be taken independently for credit. P/NP or letter grading.


Evolution of Genus Homo. (5) Lecture, three hours; discussion, one hour. Requisite: course 7 or 12. Origin and evolution of genus Homo, including archaic sapiens and Neandertals. Morphology, ecology, and behavior of these groups. Course ends with appearance of modern humans. May be taken independently for credit. P/NP or letter grading.

Reconstructing Hominid Behavior and Paleoecology. (4) Seminar, three hours. Use of paleontological, archaeological, ecological, and geological evidence to infer late Pliocene and early Pleistocene hominid behavior and environmental context of human evolution. P/NP or letter grading.


Human Osteology. (4) Lecture, three hours; laboratory, four hours. Examination of human skeletal and muscular systems, concerned with both form and function. Students expected to recognize important anthropological, archaeological, and evolutionary aspects of human anatomy, including major bones, and know origins, insertions, and action of major muscles. How to sex and age skeletons and introduction to paleopathology. Letter grading.

Human Evolutionary Biology. (4) Lecture, three hours; seminar, one hour. Requisite: course 7 or 12. Examination of human evolution from a comparative point of view. Emphasis on current comparative studies of modern and nonmodern human populations. P/NP or letter grading.

Evolutionary Psychology. (4) Lecture, three hours. Requisite: course 7 or 12. Examination of human evolution from an evolutionary perspective. Emphasis on theories and evidence. May be repeated for credit with topic change. P/NP or letter grading.

Cities Past and Present. (4) Lecture, three hours. Requisite: course 8. Survey of pre-industrial and industrial societies and cities, ranging from use of fractals in ecological and evolutionary record, encompassing cultural processes. P/NP or letter grading.

Cultural Anthropology

Study of Culture. (4) Lecture, three hours; discussion, one hour (when scheduled). Requisite: course 9. Designed for juniors/seniors. Twentieth-century elaboration and development of concept of culture. Examination of five major paradigms: culture as human capacity, as patterns and products of behavior, as systems of meaning and cognition, as generative structure and semiotic system, as component in social action and reality construction. (Core course for cultural field.) P/NP or letter grading.

Culture: What Makes It All Work. (4) Lecture, three hours. Preparation: two lower division social sciences courses (may be from different departments). Examination of some basic questions addressed by anthropologists in their study of what is meant by culture. Consideration of theories of culture and evolutionary origins of culture. Review of new analytic methods that allow students to begin research into nature of culture and introduction to multigrant simulation as framework for modeling how culture can be both supra-organic and embedded in minds of culture bearers. P/NP or letter grading.

Anthropology of Food. (4) Lecture, three hours. Requisite: course 7 or 12. Examination of some major questions addressed by anthropologists in their study of what is meant by culture. Consideration of theories of culture and evolutionary origins of culture. Review of new analytic methods that allow students to begin research into nature of culture and introduction to multigrant simulation as framework for modeling how culture can be both supra-organic and embedded in minds of culture bearers. P/NP or letter grading.

Symbolic Systems. (4) Lecture, three hours. Requisite: course 7 or 12. Use of ethnography and cultural theory to study systems of thought, behavior, and communication expressed in symbolic mode as distinguished from discursive, instrumental, and causal modes. Methodological and interpretational study of symbolic meaning, including experiential approach. P/NP or letter grading.

Aesthetic Systems. (4) Lecture, three hours. Requisite: course 7 or 12. Examination of anthropological, sociological, and ethnological research on the evolution of culture and its role in human social activity, with emphasis on the internationalization of culture. P/NP or letter grading.

The Anthropology of Food. (4) Lecture, three hours. Requisite: course 7 or 12. Examination of some major questions addressed by anthropologists in their study of what is meant by culture. Consideration of theories of culture and evolutionary origins of culture. Review of new analytic methods that allow students to begin research into nature of culture and introduction to multigrant simulation as framework for modeling how culture can be both supra-organic and embedded in minds of culture bearers. P/NP or letter grading.

Symbolic Systems. (4) Lecture, three hours. Requisite: course 7 or 12. Examination of anthropological, sociological, and ethnological research on the evolution of culture and its role in human social activity, with emphasis on the internationalization of culture. P/NP or letter grading.

Aesthetic Systems. (4) Lecture, three hours. Requisite: course 7 or 12. Examination of anthropological, sociological, and ethnological research on the evolution of culture and its role in human social activity, with emphasis on the internationalization of culture. P/NP or letter grading.
Linguistic Anthropology

M140. Language in Culture. (5) (Same as Linguistics M146.) Lecture, three hours; discussion, one hour; fieldwork, two hours. Requisite: course 33 or Linguistics 20. Contemporary social anthropology; relationship of habitual thought and behavior to language; and language and classification of experience. Holistic approach to study of language, with emphasis on relationship between linguistic anthropology and biology, culture, and social anthropology, as well as archaeology. (Core course for linguistics field.) P/NP or letter grading.

141. Ethnography of Everyday Speech. (5) Lecture, three hours; fieldwork; Requisite: course 33. Designed for juniors/seniors. Survey of field of psychological anthropology, with emphasis on early foundations and historical development of field. Topics include study of personality, pathology and deviance, altered states of consciousness, cognition, motivation, and emotion in different cultural settings. P/NP or letter grading.

135A-135B. Introduction to Psychological Anthropology. (4-5) P/NP or letter grading.

135C. Seminar: Psychocultural Studies. (4) Semester. Exploration of mutual relations between anthropology and other university disciplines. Students make primary records (sound tape, video-tape, or film) of naturally occurring social interactions that are analyzed in class for interactive tasks, resources, and accomplishments displayed. Laboratory and fieldwork are required. Minimal fees to offset costs of equipment maintenance and insurance required. P/NP or letter grading.

142A-142B. Microtechniques of Communication. (4) Lecture, three hours. Requisite: course M140. Course 142A or Sociology M124A is requisite to 142B. Students use taped sound (or video-tape) recordings of naturally occurring interactions to analyze linguistic and non-linguistic aspects of face-to-face interaction. Letter grading.


144. Native American Languages and Cultures. (4) Lecture, three hours; discussion, one hour. Designed for juniors/seniors. Introduction to ethnography of Native American languages and cultures. Survey of field of psychological anthropology, with emphasis on early foundations and historical development of field. Topics include study of personality, pathology and deviance, altered states of consciousness, cognition, motivation, and emotion in different cultural settings. P/NP or letter grading.

135SL. Gender and Language across Communities. (4) Lecture, three hours. Requisite: course 33. Introduction to Polynesian cultures and languages, with particular emphasis on past and present sociolinguistic systems, patterns of language structure and language use, verbal art, language socialization strategies, and forms of cultural assimilation and resistance to European contact. Fieldwork on contemporary Polynesian cultures in U.S. urban areas. Letter grading.

147. Selected Topics in Linguistic Anthropology. (4) Lecture, three hours. Study of selected topics in linguistic anthropology. Consult Schedule of Classes for topics and instructors. May be repeated for credit. P/NP or letter grading.

M148W. Talk and Body. (5) (Same as Applied Linguistics M161W and Communication Studies M123W) Lecture, three hours; discussion, one hour. Enforced requisite: English Composition 3 or 3H or English as a Second Language 36. Relationship between language and body, and the ways in which language can be critically understood as integral to interactions between individuals and between social groups. Letter grading.

149A. Language and Identity. (4) Lecture, three hours. Requisite: course 33. Language as social phenomenon. Introduction to the complex relationship between body and language and the resources of language that are analyzed in class for interactive tasks, resources, and accomplishments displayed. Laboratory and fieldwork are required. Minimal fees to offset costs of equipment maintenance and insurance required. P/NP or letter grading.

149B. Gender and Language in Society. (4) Lecture, three hours; discussion, one hour (when scheduled). Enforced requisite: course 33. Examination of role language plays in social construction of gender identities and ways in which gender impacts language use and ideologies. Letter grading.

149C. Multilingualism: Communities and Histories in Contact. (4) Lecture, three hours. Requisite: course 33. 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 narratives that contextualize cultural readings. Letter grading.

149D. Language, Culture, and Education. (4) Lecture, three hours. Requisite: course 33. Examination of various ways in which language, and culture in particular, influence not only educational processes and outcomes, but also very conceptions of what normal development processes and desirable educational outcomes are. Letter grading.

149E. Language Socialization. (4) (Same as Applied Linguistics M125.) Seminar, four hours. Exploration of process of socialization through language, and socialization to use language across lifespan, across communities of practitioners, and across different ethnic and socioeconomic groups. Examination of ways in which verbal interaction between novices and experts is structured linguistically and culturally. Letter grading.

149F. Language and Social Organization through Life Cycle. (4) Lecture, three hours. Requisite: course 33. Examination of forms of participation and talk-in-interaction across various phases of life cycle from birth to old age, using video and interactions of naturally occurring activities. How language and interaction within specific contexts are used to constitute identity and how interaction order results from face-to-face interaction provides building blocks for larger formations that arise from such activities. Letter grading.

149SL. Gender and Language across Communities. (4) Lecture, three hours; discussion, one hour. Requisite: course 33. Examination of how practices contribute to expression of gendered identities in different social groups and situations. Completion of 20 hours of service learning in community service learning program coordinated through Center for Community Learning required. Active participation in organized service that is conducted in and meets needs of communities. Letter grading.

Social Anthropology

150. Study of Social Systems. (4) Lecture, three hours; discussion, one hour (when scheduled). Enforced requisite: course 9. Introduction to more specialized social anthropology courses. Evaluation of
variation in sociocultural systems, with special emphasis on forms of inequality. Basic frameworks of anthropological variation in sociocultural systems, with special emphasis, case study, and presentations. P/NP or letter grading.


153P. Economic Anthropology. (4) Lecture, three hours. Requisite: course 9. Introduction to anthropological perspectives on economic systems and institutions. Economic facts to be placed in their larger social, political, and cultural contexts; examination of modes of production, distribution, and consumption in all past and present societies. Cross-cultural perspectives on the relationship of power to social change. Critical review of relevant theoretical and practical issues using ethnographic case study, and presentations. P/NP or letter grading.


M155. Women's Voices: Their Critique of Anthropology of Japan. (4) (Same as Women's Studies M155.) Lecture, three hours. Preparation: introductory sociocultural anthropology course. Anthropology of Japan has long viewed Japan as 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.

M155Q. Women and Social Movements. (4) (Same as Women's Studies M155Q.) Lecture/discussion, three hours. Recommended preparation: prior women's 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.

156. Anthropology of Religion. (4) Lecture, three hours. Survey of religious systems in comparison with religious ideologies and action systems, including understanding 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.

157. Selected Topics in Social Anthropology. (4) Lecture, three hours. Study of selected topics in social anthropology. Consult Schedule of Classes for topics and instructors. May be repeated for credit. P/NP or letter grading.

158. Hunting and Gathering Societies. (4) Lecture, three hours. Requisite: course 9. Survey of hunting and gathering societies. Examination of distinctive features from both ecological and cultural viewpoints. Discussion of possibility of developing general framework for synthesizing these two viewpoints. Use of this model as basis for examining relevance of hunting and gathering societies as understanding of complex societies. P/NP or letter grading.


M158Q. Past Societies and Their Lessons for Our Own Future. (5) (Same as Geography M153 and History M153.) Lecture, two hours; discussion, two hours. Examination of modern and past tribal and band societies (Amazonian Indians, Kalahari San, New Guinea; ancient Polynesians) as background to examination of how modern state societies are coping or failing to cope with similar issues. P/NP or letter grading.

159. Warfare and Conflict. (4) Lecture, three hours. Examination of warfare and conflict as these have been treated in anthropological literature. Cross-cultural comparison of institutions such as raids, feuds, ritual warfare. Consideration of application of anthropological theory to battles of modern warfare, and large-scale ethnic conflict. Letter grading.

M159P. Constructing Race. (4) (Same as Afro-American Studies M159P and Asian American Studies M159P) Lecture, three hours. Constructing race, socially constructed category, from anthropological perspective. Consideration of development of racial categories over time and in different regions, racial passing, and multiracial identity in U.S., whiteness, race in popular culture, and race and identity. P/NP or letter grading.

Applied Anthropology


162. Language Endangerment and Linguistic Revitalization. (4) (Same as American Indian Studies M162.) Lecture, three hours; activity, one hour. Requisite: course 33. 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 languages are making 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 nation-building, industrial societies, language ideologica 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 renewal practices. Examination of some diverse strategies that have been attempted, including immersion, language and cultural classes, master-apprentice, interactive multimedia, mass media approaches, and language policy-reform approaches. Evaluation of effectiveness of these measures and of imagery used to discuss language endangerment. P/NP or letter grading.

163. Selected Topics in Applied Anthropology. (4) Lecture, three hours. Study of selected topics in applied anthropology. Consult Schedule of Classes for topics and instructors. May be repeated for credit. P/NP or letter grading.


167. Urban Anthropology. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for junior/senior social sciences majors. Introduction to modern industrial cities and urban life. Examination of notions 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 perspectives and priorities on urban issues. P/NP or letter grading.

M168. Culture, Illness, and Healing. (4) (Same as Asian American Studies M168P) Lecture, four hours. Requisite: course 9 or 150. Survey of medical anthropological approaches. Examination of cultural settings, including our own. P/NP or letter grading.

CM168P. Perspectives on Health of Native North Americans. (4) (Same as American Indian Studies CM168P) Seminar, three hours. Recommended preparation: some knowledge of medical anthropology and/or history and contemporary situation of first peoples of North America. Examination of different perspectives related to health and healthcare of Native North Americans (within present boundaries of U.S. and Canada) in relation to cultural, social, political, and economic aspects of changing historical context. Concurrently scheduled with course CM268P. P/NP or letter grading.

C169R. Repatriation of Native American Human Remains and Cultural Objects. (4) Lecture, two hours; discussion, one hour. Native Americans have recently been successful in obtaining passage of federal state laws repatriating Native cultural objects to them. Examination of this phenomenon. Concurrently scheduled with course C269R. Letter grading.

Regional Cultures

Africa

171. Sub-Saharan Africa. (4) Lecture, three hours. Issues of ecology and political economy; continuing impacts of colonialism, nationalization, and current challenges for development; changes in social relations. Examination of Africa's significance to development of anthropology. Cultural background for understanding events in contemporary Africa provided. Letter grading.

M171P. Culture Area of Maghrib (North Africa). (4) (Same as Arabic M171 and History M108C.) Lecture, three hours. Designed for juniors/seniors. Introduction to North Africa, especially Morocco, Algeria, Tunisia, and Libya, also known as Maghrib or Tarnaghza. Topics include changing notions of personal, tribal, ethnic, linguistic and religious identities; colonialism; gender and legal rights, changing representations of Islam, and religions in region's public spaces. P/NP or letter grading.

North America

172A. Native North Americans. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/senior social sciences majors. Introduction to modern industrial cities and urban life. Examination of notions 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 perspectives and priorities on urban issues. P/NP or letter grading.

tention to subsistence systems and their relationship to social institutions and cultural practices, especially reli-

172B. Change and Continuity among Native North Americans. (4) Lecture, three hours. Requisite: course 172A. Consideration of tremendous change Native American societies and cultures have undergone since European contact. Emphasis on patterns of adaptation and continuity as Native Americans con-

172R. Cultures of Pueblo Southwest. (4) Lecture, three hours. Survey of ethnographic and ethnohistori-

North America. (4) Lecture, three hours. Overview of subsistence systems and their relationship to climate and landscape.

Middle America

173Q. Latin American Communities. (4) Lecture, three hours. Overview of social and cultural anthropol-

South America

174P. Ethnography of South American Indians. (4) Lecture, three hours. Introduction to ethnography of South American Indians, with special emphasis on the region of Lowland South America. Survey of history and develop-

Asia

175Q. Ideology and Social Change in Contempo-

175R. Cultures of Pueblo Southwest. (4) Lecture, three hours. Survey of ethnographic and ethnohistori-

175U. Cultures of Indonesian Archipelago. (4) Lecture, three hours. Overview of social and cultural anthropol-

177. Cultures of Pacific. (4) Lecture, three hours. Overview of Pacific cultures, focusing on the impact of European exploration and colonization.

Regional Cultures

179. Selected Topics in Regional Cultures. (4) Lecture, three hours. Study of selected topics in regional cultures. Consult Schedule of Classes for topics and instructors. May be repeated for credit. P/NP or letter grading.

History, Theory, and Method

181. Critical Social Theory. (4) Seminar, three hours. Requisite: course 9. Limited to juniors/seniors. In-depth introduction to work of classic social theorists, Karl Marx and Max Weber. Examination of their influ-

182. History of Anthropology. (4) Lecture, three hours. Brief survey of development of Western social science, particularly anthropology, from Greek and Ro-

183. History of Archaeology. (4) Lecture, three hours. Preparation: one division in arche- nomic and physical approaches to the study of human societies and cultures. P/NP or letter grading.

185A-185B. Theoretical Behavioral Ecology. (4-4) Lecture, three hours. Exploration of different approaches to modeling of animal behavior. P/NP or letter grading.

191HA. Beginning Seminar. (4) Seminar, three hours. Limited to anthropology honors program stu-

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.

Special Studies

191HC. Data Analysis. (4) Seminar, three hours. Limited to anthropology honors program students. Survey of major forms of data analysis in anthropology to aid students in analyzing their own research data. Letter grading.

191HD. Writing for Anthropology. (4) Seminar, three hours. Limited to anthropology honors program students. Discussion of writing skills, focus on how to write honors theses. Letter grading.

193. Journal Club Seminars: Anthropology. (1) Seminar, one hour. Limited to graduate students. Discussion of current readings in discipline. May be linked with speaker series. May be repeated for credit with topic change. P/NP grading.


194. Research Group Seminars: Anthropology. (1) Seminar, one hour. Limited to graduate students who are part of research group or internship. Discussion of research methods and current literature in discipline or of research of faculty members or students. May meet concurrently with graduate research semi-

197. Individual Studies in Anthropology. (2 to 8) Tutorial, to be arranged. Limited to juniors/seniors. Individu-

199. Directed Research in Anthropology. (2 to 8) Tutorial, to be arranged. Limited to juniors/seniors. Supervision of original 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. Proseminar: Practice of Anthropology. (4) Seminar, three hours. Required of new graduate students. Discussion of anthropology as four-field discipline and interconections among four major fields. Practice of anthropology as exemplified through faculty presentations of how research is conceived, formulated, and executed. Students develop individual research proposals. Letter grading.

200P. Cultural Anthropology Field Preparation. (4) Seminar, three hours. Requisite: course 200. Follows course 200 as field preparation for summer research for cultural anthropologists. Students develop specific research methods and present them in seminar. Practical issues (e.g., consent, property, health concerns) also addressed. S/U grading.

M201A-M201B. Graduate Core Seminars: Archaeology. (4-4) (Same as Archaeology M201A-M201B.) Seminar, two hours. M201A is required of anthropology students in archaeology field seminar. Seminar discussions based on carefully selected list of 25 major works related to development of archaeology in social and cultural anthropology. Discussion of issues that have guided arguments about how archaeo- logical classification of artifacts should be conducted, with focus on ceramological classification and discovery of cultural types. Methods for implementing discovery approach to classification illustrated with classical pottery examples. Review of relationship between classification, style, and function. S/U or letter grading.

212P. Selected Topics in Hunter/Gatherer Archaeology. (4) Seminar, three hours. Prehistory and ethno- history of hunter/gatherer peoples. Consideration of range of issues, including but not limited to technological innovations, economic settlement and mobility, and social change. May be repeated for credit. S/U or letter grading.

212S. Selected Laboratory Topics in Archaeology. (4) (Same as Archaeology 212S.) Lecture, three hours. Designed for graduate students in archaeology in or other departments. Specialized analysis of individual classes of cultural remains. May be one of the following: zooarchaeology, palaeobotany, ceramics, lithics, analysis, rock art. Laboratory experience with collections and data. May be repeated for credit with topic change. S/U or letter grading.

212T. Intensive Laboratory Training in Archaeology. (6) (Same as Archaeology 212T.) Lecture, three hours; laboratory, two hours minimum. Advanced laboratory training for graduate students with extended laboratory hours. Specialized laboratory topics, including but not limited to lithic analysis, ceramic analysis, zooarchaeology, and palaeobotany. May be repeated for credit with topic change. S/U or letter grading.

213. Selected Topics in Old World Archaeology. (4) Seminar, three hours. May be repeated for credit. S/U or letter grading.

214. Selected Topics in Prehistoric Civilizations of New World. (4) Lecture, three hours. Mesolithic and Andean civilizations normally constitute major focus of seminar. May be repeated for credit. S/U or letter grading.

215. Field Training in Archaeology. (6 or 12) Lecture, two to three hours; fieldwork, eight or more hours (6 units) or 50 or more hours (12 units). Off-campus field archaeology course offered in regular session or summer. Intensive training in archaeological excavation, mapping, surveying, recording, preliminary analysis of site data, and project organization/supervision. May be repeated for credit. S/U or letter grading.

219. Complex Hunters/Gatherers in Theoretical Perspectives. (4) Seminar, three hours. Exploration of current research in biological anthropology (specific topics to be announced). Emphasis on nature of hypotheses and their testing in ongoing student and faculty research. May be repeated for credit. S/U or letter grading.


222. Graduate Core Seminar: Biological Anthropology. Review. (6) Seminar, three hours. Enforced corequisite: attendance, but not enrollment, in course 7 lecture. Required of all graduate anthropolo- gy students who need foundational background in bio- logical anthropology. Seminar discussion based on ba- sic evolutionary principles, behavior of nonhuman pri- mates, hominid evolutionary history, and contemporary human variation. Letter grading.

Cultural Anthropology


230Q. Theories of Culture. (4) Lecture, three hours. Exploration of aspects within culture theory: emergence of culture with modes of production, discovery of culture, and “cultural capital” and cultural change. Investi- gation of production of culture and transforma- tions of meaning within cultural domains of politics, economy, and religion. S/U or letter grading.


232V. Current Issues in Ethnography. (4) Seminar, three hours. Designed for graduate students. S/U or letter grading.
233P. Symbolic Anthropology. (4) Seminar, three hours. Requisite: course 133R. Nature of symbolic re-
lations (as distinguished from other referential ones), significance of symbolic systems (in terms of action, cognition, affectivity, contemplation), symbolic and iso-
morphic logic (as opposed to causal one) are among questions that will be for analysis and discussion. May be repeated for credit. S/U or letter grading.

233Q. Aesthetic Anthropology. (4) Lecture, three hours. Requisite: course 133R. Selected questions concern- ing visual aesthetic phenomena in their rela-
tions with social and cultural context examined in depth. May be repeated for credit. S/U or letter grading.

233R. Anthropology and Media Theory. (4) Semi-
nar, three hours. Limited to graduate students. Exam-
ination of theoretical and aesthetic concerns of film that an-
imate visual anthropology very broadly defined, includ-
ing issues of interpretation, production, and receipt of visual media, which includes ethnographic, docu-
mentary, and feature films, as well as television pro-
grammimg. S/U or letter grading.

237. Ethnographies of Information Technology. (4) Seminar, three hours. Emerging work on new infor-
mation economy, with emphasis on ethnography. Read-
ing of theoretical and practical work and materials from range of disciplines, including sociology, geography, ur-
ban studies, and management studies. S/U or letter grading.

234. Seminar: Psychocultural Studies and Medical Anthropology. (4) Seminar, three hours. Devoted to pres-
tate research in psychological studies. Survey of work in child development and socialization, personality, psychobiology, transcultural psychiatry, de-
viance, learning, perception, cognition, and psychocul-
tural perspectives on change. S/U or letter grading.

M234P. Transcultural Psychiatry. (4) Same as Psy-
chiatry M222.) Lecture, three hours. Consideration of psy-
chiatric issues from transcultural perspective, such as studies of drug use, deviance, suicide, homicide, be-
vavioral disorders, “culture specific” syndromes, non-
Western psychiatric conditions, and cross-cultural psychiatry. May be repeated for credit. S/U or letter grading.

M234Q. Psychological Anthropology. (4) Same as Psy-
chiatry M272.) Lecture, three hours. Various psy-
chological issues in anthropology, both theoretical and methodological. Areas of interest include such things as culture and history, culture and personality, and cul-
ture psychiatry. Discussion of questions relating to symbolic and unconsciousness processes as they relate to cultural systems. Emphasis on hands-on term to term. May be re-
peated for credit. S/U or letter grading.

234R. Culture, Cognition, and Being in World. (4) Seminar, three hours. Whether and how culture and thought shape each other is historically enduring and controversial topic. Focus on work challenging prevail-
ing implicit acceptance of theoretical separation be-
tween study of mind and study of culture. S/U or letter grading.

M234T. Anthropological Perspectives on Human Body. (2 to 4) (Same as Psychiatry M262.) Seminar, three hours. Exploration of how sociocultural and politi-
cal dynamics shape perceptions of and understand-
ings about human body, and how, reciprocally, those perceptions and understandings influence social pro-
cesses. Includes materials from both non-Western and Western perspectives. S/U or letter grading.


M236P. Cross-Cultural Studies of Socialization and Children. (4) (Same as Psychiatry M214.) Lecture, three hours. Selected topics in cross-cultural study of soci-
olinguistic, and ethnogenetic categories of influence and social indexing, relation between language and social context. S/U or letter grading.

M241. Topics in Linguistic Anthropology. (4) (Same as Linguistics M246C.) Lecture, three hours. Problems in relation of language, culture, and society. May be repeated for credit. S/U grading.

M242. Ethnography of Communication. (4) (Same as Applied Linguistics M207.) Lecture, three hours. Designed for graduate students. Seminar devoted to exami-
ning, analyzing, and criticizing the ways in which lan-
guage is used in ethnographic field data. S/U or letter grading.

M233P. Selected Topics in Field Ethnography. (4 to 8) Seminar, three hours. Discussion and practicum in various techniques for collecting and analyzing ethnog-
ographic field data. S/U or letter grading.

Linguistic Anthropology

M240. Social Foundations of Language. (4) (Same as Applied Linguistics M249B.) Lecture, three hours. Requisite: Linguistics 20. Basic grounding in sociolin-
guistic theory and methodology. Introduction to current is-
sues in study of tested behavior, including varied ways scholars consider relation between language and social context. S/U or letter grading.

M241. Topics in Linguistic Anthropology. (4) (Same as Linguistics M246C.) Lecture, three hours. Problems in relation of language, culture, and society. May be repeated for credit. S/U grading.

M242. Ethnography of Communication. (4) (Same as Applied Linguistics M207.) Lecture, three hours. Designed for graduate students. Seminar devoted to examin-
ing, analyzing, and criticizing the ways in which lan-
guage is used in ethnographic field data. S/U or letter grading.

M243Q. Native American Languages and Cultures. (4) Lecture, three hours; seminar, two hours. Prep ara-
tion: prior coursework in either anthropology, linguis-
tics, or American Indian studies. Introduction and compari-
son of sociolinguistic aspects of language use in Native American Indian speech communities. Specific topics include both micro- and macro-socio-
linguistic topics. Micro-sociolinguistic topics are com-
priised of such issues as multilingualism, cultural differ-
ences regarding appropriate communicative behavior and variation within speech communities (e.g., male and female speech, baby talk, ceremonial speech, etc.). Macro-sociolinguistic considerations include lan-
guage contact and its relationship to language change and language maintenance. Concurrently scheduled with course C144. S/U or letter grad-
ing.

M243Q. Afro-American Sociolinguistics: Black English. (4) (Same as Afro-American Studies M252.) Lecture, three hours. Basic information on Black English American, one important minority dialect in U.S. Social implications of minority dialects exam-
ined from perspectives of their genesis, maintenance, and social functions. General problems and issues in fields of sociolinguistics examined through case study approach. Students required to conduct research in consultation with instructor and participate in group discussions. S/U or letter grading.

M244. Field Methods in Linguistic Anthropology. (4) Seminar, three hours; work with informant, one hour. Requisite: Linguistics 20 or prior experience in linguis-
tics analysis. Practice in eliciting and transcribing lin-
guistic data from native informants. Initial focus on pho-
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guistic data from native informants. Initial focus on pho-

M251P. Cultural Ecology. (4) Seminar, three hours. Requisite: course M249B or Applied Lin-
guistics M270A. Hands-on mentorship in entering communities, obtaining informed consent, inter-
v interchange, and videorecording verbal interaction. S/U or letter grading.

M252P. Ethnographic Technologies Laboratory I. (4) (Same as Applied Linguistics M270P) Laboratory, four hours. Corequisite: course M249A or Applied Lin-
guistics M270A. Hands-on mentorship in entering communities, obtaining informed consent, inter-
v interchange, and videorecording verbal interaction. S/U or letter grading.

M259Q. Ethnographic Technologies Laboratory II. (4) (Same as Applied Linguistics M270Q) Laboratory, four hours. Corequisite: course M249B or Applied Lin-
guistics M270B. Hands-on mentorship in entering ethnog-
ographic video footage, incorporating video frame grabs into transcript and analysis of verbal interaction, writing group reports, and assembling conference presenta-
tions. S/U grading.

Social Anthropology

250. Selected Topics in Social Anthropology. (4) Seminar, three hours. Requisite: three hours of current the-oretical views and literature, S/U or letter grading.

251P. Cultural Ecology. (4) Lecture, three hours. May be repeated for credit. S/U or letter grading.
252P. Comparative Systems of Social Inequality. (4) Seminar, three hours. Examination in historical and contemporary perspective of particular systems of structured social inequality based on rank, class, caste, ethnicity, gender, age, sexual preference, disability, etc., to develop unified theory of social inequality. Examples from Latin American, European, African, and American cultures. S/U or letter grading.

252Q. Anthropology of Resistance. (4) Lecture, one hour; discussion, two hours. Preparation: at least one upper division sociocultural anthropology course. Exploration of recent works in anthropology and other disciplines that address practice and resistance, as part of effort to understand processes that have shaped modern and postcolonial society and culture. Letter grading.

M252S. Constructing Race. (4) (Same as Afro-American Studies M252S.) Seminar, three hours. Examination of social construction of race from anthropological perspective in order to refine understanding of ways this category has had and continues to have concrete impact in U.S. Exploration of range of topics, including role discipline of anthropology has played in construction of race, representations of race in popular culture, instability of race revealed in passing and debates about multiracial identity, construction of whiteness, and identity politics. S/U or letter grading.

253. Economic Anthropology. (4) Lecture, three hours. May be repeated for credit. S/U or letter grading.

254. Kinship. (4) Lecture, three hours. May be repeated for credit. S/U or letter grading.

255. Comparative Political Institutions. (4) Lecture, three hours. May be repeated for credit. S/U or letter grading.

255P. Political Economy. (4) Seminar, three hours. Designed for graduate students. Introduction to range of approaches anthropologists have used to analyze political economy of capitalism in relation to issues of nation and state building, race, colonialism, and transnationalism. S/U or letter grading.

256. Anthropology of Conflict. (4) Seminar, three hours. Open to undergraduates with consent of instructor. Examination of events and institutions associated with large-scale or ongoing conflict in variety of settings. Particular consideration to roots of violence, violent manifestations and cross-cultural misunderstandings, and nature and content of armed confrontation. S/U or letter grading.

257. Space, Place, and Identity. (4) Seminar, three hours. Recent rise of space/place in humanities and social sciences seems to relate to crisis of modernity in global capitalism. Designed to explore this theoretical theme and provide useful methodologies to students of anthropology and history who are trying to ground their research in specific places. S/U or letter grading.

258. Work, Gender, and Race. (4) Seminar, three hours; fieldwork, three hours. Limited to graduate students. Impact of expansion of corporate globalization and neoliberalism on U.S. has been to create shift from economy and occupational structure based on manufacturing to one based on services. Shift has been accompanied by increasing polarization of jobs by class, with stratospheric compensation at top and poverty-level wages at bottom, with loss of middle-income jobs, leaving U.S. as deeply split between rich and poor. Examination of these changes and how they affect nature of work and career opportunities of workers in U.S. by gender, race, ethnicity, and immigration status. S/U or letter grading.


263P. Gender Systems. (4) (Same as Women's Studies M263P.) Seminar, three hours. Current theoretical developments in understanding gender systems cross-culturally, with emphasis on relationship between systems of gender, economy, ideological systems, and social inequality. Selection of ethnographic cases from various cultures in the world, students present their research on topics of their choice. S/U or letter grading.

263Q. 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 medical anthropology, health, and illness. Bases for written critical analysis and class discussion provided through key theoretical works. S/U or letter grading.

264. Latin America: Traditional Medicine, Shamanism, and Folk Illness. (4) (Same as Community Health Sciences M264 and Latin American Studies M264.) Lecture, three hours. Recommended preparation: at least one course from anthropological, and/or medical anthropology. Emphasis on 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 audiotope. Letter grading.

265. Anthropology of Genetic Knowledge. (2 to 4) (Same as Psychiatry M265.) Seminar, three hours. Exploration of how sociocultural and political dynamics shape our understanding of genetic discoveries and how genetic information is used to create conceptions of self and society. Letter grading.

266. Health and Culture in Americas. (4) (Same as Community Health Sciences M266 and Latin American Studies M266.) Lecture, three hours. Recommended requisite: Community Health Sciences 132. Health issues throughout Americas, especially indigenous/Mestizo Latin American populations. Holistic approach covering politics, history, geography, human rights, maternal/child health, culture. Letter grading.

266N. Narrative and Times of Trouble. (4) Seminar, three hours. Recommended requisite: at least one course from 203A, 203B, 203C, 204, or M242. Exploration of how linguistic and psychological/medical anthropology inform each other in relation to narrative and times of trouble. Topics include narrative, storytelling, healing, and experience; remembering through narrative; narrative subjectivity; and narrative and selves in motion. Letter grading.

268P. Perspectives on Health of Native North Americans. (4) (Same as American Indian Studies M268P.) Seminar, three hours. Recommended preparation: some knowledge of medical anthropology and/or history and contemporary situation of first peoples of North America. Examination of different perspectives related to health and healthcare of Native North Americans (within present boundaries of U.S. and Canada) in relation to cultural, social, political, and economic aspects of changing historical context. Concurrently scheduled with course CM168P. S/U or letter grading.


269P. Politics of Reproduction. (2 to 4) (Same as Psychiatry M269P.) Seminar, three hours. Examination of various viewpoints of variouss ways institutions influence reproductive arrangements in society. Letter grading.

271. Contemporary Problems in Africa. (4) Seminar, three hours. Focus on key issues and events. African Americans have recently been successful in obtaining passage of federal and state laws repatriating native remains and cultural objects to them. Examination of this phenomenon currently scheduled with course C169R. Letter grading.

Regional Cultures

271. Contemporary Problems in Africa. (4) Seminar, three hours. Focus on key issues and events. African Americans have recently been successful in obtaining passage of federal and state laws repatriating native remains and cultural objects to them. Examination of this phenomenon currently scheduled with course C169R. Letter grading.

272. Indians of South America. (4) (Same as Latin American Studies M250A.) Lecture, three hours. Survey of literature and research topics related to Indian cultures of South America. May be repeated for credit. S/U or letter grading.

273. Cultures of Middle East. (4) Seminar, three hours. Survey of literature and problems of various cultures of Middle East. S/U or letter grading.

276. Japan in Age of Empire. (4) (Same as Asian Medicine and History M276.) Lecture, 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 and occupied areas in this hardly explored area of study of colonialism. S/U or letter grading.

277. Anthropology of China. (4) Seminar, three hours. Designed for graduate students. Survey of selected literature and current developments in field of Chinese socio-cultural anthropology. Main topics include family and kinship, interpersonal relations, social differences, local elite and state, rituals and beliefs, popular culture, consumerism, and cultural globalization. S/U or letter grading.

History, Theory, and Method

281. Selected Topics in History of Anthropology. (4) Lecture, three hours. Particular problems in history of anthropology as dictated by interests of students and faculty. May be repeated for credit. S/U or letter grading.

282. Research Design in Cultural Anthropology. (4) Lecture, three hours. Primarily designed for graduate students preparing for fieldwork. Unique position of anthropologists among scientists and other professionals for scientific research design. Review of typical research problems and appropriate methods. Students prepare their own research designs and present them for class discussion. S/U or letter grading.

283. Formal Methods of Data Analysis in Anthropology. (4) Seminar, three hours. Current topics and issues related to formal analysis of data and representation of cultural constructs: formal models of kinship terminologies, structural models of cognitive systems, graph theoretic models of networks, models of decision-making, hierarchical information systems, stability in complex adaptive systems. S/U or letter grading.

284. Qualitative Research Methodology. (4) (Same as Community Health Sciences M216.) Discussion, three hours; laboratory, one hour. Intensive seminar/course in qualitative research methodology. Emphasis on using qualitative methods and techniques in research and evaluation related to health care. Letter grading.

284P. Anthropological Methods and Data Analysis. (4) Seminar, three hours. Limited to graduate students. Recommended preparation: research design course. Hands-on approach to qualitative methods used in anthropological research and techniques for analysis of qualitative data. Particular methods and techniques are appropriate to research questions and classroom students bring to class. S/U or letter grading.

285. Schools, Domains, and Strategies in World Archaeology. (4) Seminar, three hours. Comparative examination of schools of world archaeology, contrasting their respective databases, research strategies, and relations to allied intellectual disciplines. Archaeol-
ogists from all departments are welcome, as are students interested in history or philosophy of science. Letter grading.

285P. Selected Topics in Anthropological/Archaeological Theory. (4) Seminar, three hours. Designed for graduate students. Variable topics course on important theoretical subjects in anthropological archaeology. Topics include evolutionist and cultural complexity, ethnography for archaeologists, power and hierarchy in intermediate societies, materialist/idealist debates, urbanism, and exchange systems. May be repeated for credit. S/U or letter grading.

286P. Selected Topics in Computer Simulation and Modeling. (4) Lecture, three hours. Applications of computer models to specific problems. Letter grading.

287P. Anthropology and Colonialism. (4) Lecture, three hours. Designed for graduate students. Exploration of multicultural nature of colonialism and its cultural manifestations in variety of geographical areas. Reading includes history of anthropology, for, as Talal Asad argues, "anthropology emerged as distinctive discipline at beginning of colonial era." S/U or letter grading.

297O. Culture of Intersubjectivity. (4) Seminar, three hours. Designed for graduate students. Examination of development and application of poststructural theories in anthropology by exploring interdisciplinary connections, especially as they concern concept of culture, narrative, ethnographic writing, reflexivity, politics of representation, historicity, and study of self, identity, and belonging. S/U or letter grading.

287P. Anthropology and Colonialism. (4) Lecture, three hours. Designed for graduate students. Exploration of multicultural nature of colonialism and its cultural manifestations in variety of geographical areas. Reading includes history of anthropology, for, as Talal Asad argues, "anthropology emerged as distinctive discipline at beginning of colonial era." S/U or letter grading.

M287O. Native American Historical Demography. (4) Same as History M260D. Lecture, two hours; discussion, one hour. Examination of population history of Native Americans north of Mexico prior to and following contact with Europeans, Africans, and others, circa 1492. Emphasis on number of American Indians and other Native Americans, their decline following European contact, and their recent resurgence. Letter grading.

288. Relational Models Theory and Research Design. (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 of most social coordination: communal sharing, authority ranking, equality matching, and market pricing. Exploration of how people use these RMs to motivate, generate, constitute, coordinate, judge, and sustain social interaction. RMT aims to account for what is universal and what varies across cultures, posing necessity for cultural complements that specify how and with whom each relational model operates. Readings may include RMT research in social anthropology, archaeology, social theory, semiotics, linguistics, development, cognitive, social, political, moral, clinical, and cultural psychology, neuroscience, evolution, sociology, family studies, philosophy, management, marketing, and consumer psychology, economics, justice, public health, public policy, and international development. Letter grading.

292. Making Oral Presentations. (4) Lecture/student presentations, two hours; discussion, one hour. Designed for graduate students. How to organize and present seminar reports, papers at scholarly conferences, and lectures to professional audiences. Opportunity for students to develop their speaking skills through actual practice in workshop atmosphere of mutual support and constructive criticism. S/U grading.

M293. Culture, Brain, and Development Forum. (1) Same as Applied Linguistics M232, Education M285, Neuroscience M293, and Psychology M248.) Seminar, 90 minutes every other week. Interdisciplinary seminar series to provide students with exposure to current research in understanding complex relationship between culture, brain, and development. S/U grading.

M293S. Culture, Brain, and Development. (4) Same as Applied Linguistics M232, Education M285, and Psychology M247.) Seminar, three hours. Designed for graduate students. Integration of knowledge across different disciplines to understand interrelations of culture, brain, and development, where development includes both human ontology and human phylogeny. S/U or letter grading.

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 complex relationship of human societies from complexity and multifaceted perspective. May be repeated for credit. S/U grading.


M295S. Interdisciplinary Relationship Science. (4) Same as Education M297, Psychology M236, and Sociology M270.) Lecture, three hours. Limited to graduate students. Diverse approaches to relationship science in fields of anthropology, 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.

297. Selected Topics in Anthropology. (2 to 4) Seminar, three hours. Designed for graduate students. Study of selected topics of anthropological 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 personnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance and evaluation. May be repeated for credit. S/U or letter grading.

495. Teaching Anthropology. (2 to 4) Seminar/workshop, three hours. Designed for graduate students. Required of all new teaching assistants. Workshop seminar in teaching techniques, including evaluation of each student's own performance as teaching assistant. Four-day workshop precedes beginning of term, followed by 10-week seminar during term designed to deal with problems and techniques of teaching anthropology. Unit credit may be applied toward full-time equivalence but not toward nine-course requirement for M.A. 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.


599. Research for Ph.D. Dissertation. (2 to 12) Tutorial, to be arranged. Ph.D. dissertation research or writing. Students must have completed qualifying examinations and ordinarily take no other coursework. S/U grading.

APPLIED LINGUISTICS

Chair

Shoichi Iwasaki, Ph.D., Chair

Professors

Lyle F. Bachman, Ph.D.
Susan R. Curtiss, Ph.D.
Charles Goodwin, Ph.D.
Marjorie Harness Goodwin, Ph.D.
Nina M. Hyams, Ph.D.
Shoichi Iwasaki, Ph.D.
Olga Kagan, Ph.D.
Edward L. Keenan, Ph.D.
Paul V. Koskivity, Ph.D.
Reynaldo F. Macias, Ph.D.
Pamela L. Munro, Ph.D.
Elinor Ochs, Ph.D.
Susan J. Pfann, Ph.D.
John H. Schumann, Ed.D.
Hongyin Tao, Ph.D.
Noreen M. Webb, Ph.D.
Olga T. Yokoyama, Ph.D.

Professors Emeriti

Marianne Celce-Murcia, Ph.D.
Frederick D. Erickson, Ph.D.
Evelyn R. Hatch, Ph.D.
Earl J. Rand, Ph.D.
Emanuel A. Schiefflin, Ph.D.

Assistant Professor

Katrina D. Thompson, Ph.D.

Adjunct Assistant Professors

Nancy E. Jones, Ph.D.
Annelie M. Rugg, Ph.D.

Scope and Objectives

UCLA is a dynamic place to study applied linguistics, a discipline that investigates language with relevance to issues in the everyday world. Situated in discursive and interactional contexts, language is essential to all aspects of life from personal to social. Interdisciplinary in nature, applied linguistics sheds new light on the nature of language and language use. Faculty members, including affiliated members in the Anthropology, Asian Languages and Cultures, Chicana and Chicano Studies, Education, Linguistics, Psychology, and Sociology Departments whose participation reinforces the interdisciplinary nature of applied linguistics research, represent a wide range of expertise and experience in language-related research.

The Department of Applied Linguistics is at the forefront of research in the field of applied linguistics and offers programs leading to the Bachelor of Arts, Master of Arts, and Ph.D. de-
Undergraduate Study
The Undergraduate Council of the UCLA Academic Senate voted to suspend admissions to the African Languages B.A., Applied Linguistics B.A., Language, Interaction, and Culture minor, and Language Teaching minor effective Fall Quarter 2012. Students currently in the degree programs and minors are not affected by the admissions suspension.

African Languages B.A.
Preparation for the Major
Required: Linguistics 20, nine courses from African Languages 1A through 42C and 197 (six in one language and three in another).

Transfer Students
Transfer applicants to the African Languages 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 language and one year of one other language.

Refer to the UCLA Transfer Admission Guide at http://admissions.ucla.edu/transfer/adm_tr.htm for up-to-date information regarding transfer selection for admission.

The Major
Required: A minimum of 13 upper division courses, including three courses in an African language; African Languages M187, Linguistics 103; two courses from Film and Television 106C, French 121, Theater 102E, World Arts and Cultures 134, or one or more special 4-unit African Languages 197 tutorials focusing on literature in an African language; three courses from Ethnomusicology 136A, C136B, History 121A, 121B, 121C, 122A, 122B, 123A, 123B, 124A, 124B, Linguistics 110, 120A, 120B or 127, 140, M140, 170, Political Science 151A, 151B, 151C, Linguistics 165A or 165B (or 200A or 200B with a grade of A in 120A or 120B respectively and consent of instructor) and completion of the sixth term in one of the following non-African languages are strongly recommended: Afrikaans, Arabic, Dutch, French, German, Portuguese.

Applied Linguistics B.A.
The Applied Linguistics major involves both theory-research and practice. On the theory-research side, it provides students with the opportunity to investigate the links between language, culture, social organization, and learning. On the practical side, with focus on service learning, it engages students in the community, schools, and workplaces of our geographic setting. The major encourages students to reflect on their lives with regard to language use and to bring to bear the academic resources of their education on these reflections.

Students must have an overall grade-point average of 2.0 or better to enter the major. Each preparation course must be passed with an average grade of C or better and must be completed before enrolling in courses for the major. A 2.0 grade-point average in courses for the major is required.

Preparation for the Major
Required: Applied Linguistics 10 or 10W; two courses from 20, 30 (or 30W), 40 (or 40W), Anthropology 33, and Psychology 10; Linguistics 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, one introduction to linguistic anthropology course, and one introduction to sociology course.

Refer to the UCLA Transfer Admission Guide at http://www.admissions.ucla.edu/prospect/adm_tr.htm for up-to-date information regarding transfer selection for admission.

The Major

Applied Linguistics M121SL, M165SL, M172SL, and C175 serve as capstone courses. Courses designated as both service learning and capstone courses may be applied toward both the service learning and capstone requirements. Service learning and capstone courses may not be taken during the freshman or sophomore year. No more than two courses from C195, 197, 198, and 199 may be applied toward the major.

Honors Program
Honors in applied linguistics are awarded at graduation to those students who have completed all preparation courses and requirements for the major with an overall grade-point average of 3.5 or better and who have received a grade of A in Applied Linguistics 198 or 199.

Language, Interaction, and Culture Minor
The Language, Interaction, and Culture minor is designed to train students in the naturalistic study of discourse in everyday interaction.

To enter the minor, students must have an overall grade-point average of 2.0 or better, have completed 80 quarter units, and file a petition with the minor adviser, 3300A Rolfe Hall, (310) 825-4631.

Required Lower Division Courses (8 units): Two courses from the following, with each course from a different group: group 1 — Anthropology 33 or 34; group 2 — Sociology 3 or 24; group 3 — Linguistics 1 or 2 or 20.

Required Upper Division Courses (28 units): Applied Linguistics M194 and six courses from the following, with at least one course from each group: group 1 — Anthropology M140, 141, 142A, 143, C144, M145, 146; group 2 — Sociology M124A, M124B, CM125, 126, M176; group 3 — Applied Linguistics 100, C116, 121SL, M125, M161W, 170, Chicana and Chicano Studies 160, Japanese M120, CM122, Linguistics 114, 170.

No more than two upper division elective courses may be applied toward both this minor and a major or minor in another department or program.

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.

Language Teaching Minor
The Language Teaching minor provides students with an overview of current pedagogical theories and practices in language teaching; the experience of observing the language acquisition process both in and out of the classroom; a supervised practicum experience in a variety of language classroom settings; and an opportunity to reflect on the interaction of theory and practice in language teaching.

To enter the minor, students must have an overall grade-point average of 2.0 or better, have completed 80 quarter units, and file a petition with the undergraduate adviser.

Required Lower Division Course (5 units): Linguistics 20 with a grade of C or better.

Required Upper Division Courses (32 units): Eight courses as follows: one from Applied Linguistics 101, 101W, or 102W; C110, C116, C118B; and a minimum of four elective courses from C111, C112, C113, C114, C115A, C117, C118A, C153, C155, C157, M161W, M165SL, English 113A, Indo-European Studies M150 (or Linguistics M150), Linguistics 130, C140, 175.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major or minor requirements in another department or program, 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 the minor adviser 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, http://www.gradnet.ucla.edu/gasaa/library/pgmrqintro.htm. 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 reviews proposed admissions to the Applied Linguistics M.A., C.Phil., and Ph.D. degrees effective Fall Quarter 2012. Students currently in the degree programs are not affected by the admissions suspension.

The Department of Applied Linguistics offers Master of Arts (M.A.), Candidate in Philosophy (C.Phil.), and Doctor of Philosophy (Ph.D.) degrees in Applied Linguistics and a Master of Arts (M.A.) degree in Teaching English as a Second Language. A Teaching English as a Second/Foreign Language Certificate is also offered; however, admissions have been suspended as of Spring Quarter 2010.

African Languages

Lower Division Courses

1A-1B-1C. Elementary Swahili. (4-4-4) Lecture, five hours. Course 1A is enforced requisite to 1B, which is enforced requisite to 1C. Major language of East Africa, particularly Tanzania. P/NP or letter grading.

2A-2B-2C. Intermediate Swahili. (4-4-4) Lecture, four hours. Enforced requisite: course 1C. Course 2A is enforced requisite to 2B, which is enforced requisite to 2C. P/NP or letter grading.

4. Conversational Swahili. (1) Seminar, one hour. Enforced requisite: courses 1A, 1B, 1C. Practice in Swahili conversation on topics of general interest, including east African current events, for Swahili students at intermediate level. May be repeated for credit. P/NP grading.

5. Building Careers through Knowledge of Africa. (1) Lecture, one hour. Guest lecturers, representing diverse careers such as academia, business, arts, non-profits, and religious work, speak about study of Africa and careers they have pursued after studying about Africa. P/NP grading.


17. Intensive Elementary Zulu. (12) Lecture, 20 hours (eight weeks). Intensive instruction (equivalent to courses 7A, 7B, 7C) in Zulu, most widely spoken of the Nguni languages of South Africa, mutually intelligible with other members of this group. Letter grading.

18. Intensive Intermediate Zulu. (12) Lecture, 20 hours (eight weeks). Enforced requisite: course 7C or 17. Intensive instruction (equivalent to courses 8A, 8B, 8C) in Zulu, most widely spoken of the Nguni languages of South Africa, mutually intelligible with other members of this group. Letter grading.


27. Intensive Elementary Xhosa. (12) Seminar, 20 hours. Basic communication skills and intensive instruction in Xhosa, with emphasis on listening and speaking. Use of various instructional media, including textbook, CD-ROMS, interactive Web-based materials, and videos. P/NP or letter grading.

29. Intensive Elementary Igbo. (12) Seminar, 20 hours. Basic communication skills and intensive instruction in Igbo, with emphasis on listening and speaking. Use of various instructional media, including textbook and audio/video materials. P/NP or letter grading.

31A-31B-31C. Elementary Bambara. (4-4-4) Lecture, five hours. Course 31A is enforced requisite to 31B, which is enforced requisite to 31C. Major language of Mali, also widely spoken in adjacent parts of West Africa; includes Maninka (Malinke), Dyula, and other mutually intelligible dialects. P/NP or letter grading.

32A-32B-32C. Intermediate Bambara. (4-4-4) Lecture, four hours. Enforced requisite: course 31C. Course 32A is enforced requisite to 32B, which is enforced requisite to 32C. P/NP or letter grading.


41A-41B-41C. Elementary Hausa. (4-4-4) Lecture, five hours. Course 41A is enforced requisite to 41B, which is enforced requisite to 41C. Major language of northern Nigeria and adjacent areas. P/NP or letter grading.

42A-42B-42C. Intermediate Hausa. (4-4-4) Lecture, four hours. Enforced requisite: course 41C. Course 42A is enforced requisite to 42B, which is enforced requisite to 42C. P/NP or letter grading.


51A-51B-51C. Elementary Amharic. (4-4-4) Lecture, five hours (15 hours for intensive course). Course 51A is enforced requisite to 51B, which is enforced requisite to 51C. Major language of Ethiopia. P/NP (undergraduates), S/U (graduates), or letter grading.

52A-52B-52C. Intermediate Amharic. (4-4-4) Lecture, five hours (15 hours for intensive course). Enforced requisite: course 51C. Course 52A is enforced requisite to 52B, which is enforced requisite to 52C. P/NP (undergraduates), S/U (graduates), or letter grading.


61A-61B-61C. Elementary Wolof. (4-4-4) Lecture, five hours. Enforced requisite: course 60A. Course 61A is enforced requisite to 61B, which is enforced requisite to 61C. Major language of Senegambia. P/NP or letter grading.

62A-62B-62C. Intermediate Wolof. (4-4-4) Lecture, five hours. Enforced requisite: course 61C. Course 62A is enforced requisite to 62B, which is enforced requisite to 62C. P/NP or letter grading.


96. Crash Course in Swahili for Volunteers. (2) Seminar, two hours. Preparation for students about to travel to East Africa for volunteer or other work experience. Students learn to interact with speakers of Swahili in most predictable contexts by asking and answering questions. Reading of simple texts and understanding of short oral instructions and descriptions in standard Swahili. P/NP or letter grading.

97. Variable Topics in Elementary and Intermediate Studies in African Languages. (1 to 6) Seminar, five hours. Instruction at elementary or intermediate level, based on needs of students, in any language for which appropriate facilities are available. Those taught in past included Akan, Enk, Ewe, Fula, Igbo, Lingala, Luganda and Xhosa. May be repeated for credit. Letter grading.

Upper Division Courses

103A-103B-103C. Advanced Swahili. (4-4-4) Lecture, four hours. Requisite: course 2C. Course 103A is requisite to 103B, which is requisite to 103C. Readings in Swahili literature and the contemporary press. Discussions mainly in Swahili. P/NP or letter grading.

109A-109B-109C. Advanced Zulu. (4-4-4) Lecture, five hours. Requisite: course 8C. Course 109A is requisite to 109B, which is requisite to 109C. Readings in Zulu literature and the contemporary press. Discussions mainly in Zulu, P/NP or letter grading.

123A-123B-123C. Advanced Yoruba. (4-4-4) Lecture, four hours. Required: course 12C. Course 123A is requisite to 12B, which is requisite to 123C. Readings in Yoruba literature and the contemporary press. Discussions mainly in Yoruba. P/NP or letter grading.

133A-133B-133C. Advanced Bambara. (4-4-4) Lecture, four hours. Requisite: course 33C. Course 133A is requisite to 133B, which is requisite to 133C. Readings in Bambara literature and the contemporary press. Discussions mainly in Bambara. P/NP or letter grading.
143A-143B-143C. Advanced Hausa. (4-4-4) Lecture, four hours. Requisite: course 42C. Course 143A is requisite to 143B, which is requisite to 143C. Readings in Hausa literature and the contemporary press. Discussions mainly in Hausa, P/NP or letter grading.

150A-150B. African Literature in English Translation. (4-4) Lecture, four hours. Narrative and didactic prose and poetry of sub-Saharan Africa and written prose and poetry of South Africa. P/NP or letter grading.

153A-153B-153C. Advanced Amharic. (4-4-4) Lecture, five hours (15 hours for intensive course). Requisite: course 52C. Course 153A is requisite to 153B, which is requisite to 153C. Readings in Amharic literature and the contemporary press. Discussions mainly in Amharic, P/NP (undergraduates), S/U (graduates), or letter grading.

170. South African Literatures and Cinema. (4) Lecture/screenings, six hours. South African apartheid and postapartheid written literatures and cinema, including lectures and discussion of written texts and films in English, P/NP or letter grading.

171. Language in South Africa: Histories, Cultures, Politics. (4) Lecture, three hours. Recommended requisite: course 32A. African languages not required. Introduction to South Africa centered around language, using variety of disciplinary perspectives as lenses to examine variegated landscape of South Africa's language history. South Africa's multilingual past and present tell us about culture and politics? To what extent does language inform volatile debates about race, sexuality, economics, and healthcare? Why does language of those debates matter? In keeping with multilingual dynamics of South African society, course is based on multiple forms of information and requires multiple levels of interaction. P/NP or letter grading.

172. Languages and Cultures of Nigeria. (4) Lecture, two hours; discussion, one hour. Recommended requisite: course 11A, 25, 29, or 41A. Knowledge of African language is not required. Introduction to Nigerian-centered around language. How does language shape ethnic identities in Nigeria (one of Africa's most multilingual nations) and Nigerian diaspora? Analysis of historical, cultural, political, and linguistic circumstance to allow students to assess different arenas of language interaction such as contemporary politics, religion, literature, and performing arts and to gain in-depth understanding of the diversity of languages and cultures, with focus on four major languages: Hausa, Igbo, Yoruba, and Nigerien Pidgin English. P/NP or letter grading.

173. Preparing to Study Abroad in Africa. (4) Lecture, three hours; discussion, one hour. Recommended preparation: one year of one African language. Development of skills, perspectives, and practical knowledge about doing abroad, with particular reference to Africa and greater emphasis on those African countries with existing Education Abroad and Summer Travel Study relationships with UCLA (e.g., Ghana, Egypt, Senegal, South Africa, and Tanzania). Exploration of other countries that may be of special interest to students. Readings, discussions, and written work on personal and national/cultural values and their role in how one views other cultures, culture shock and stages of cross-cultural adjustment, language-learning strategies, verbal and nonverbal patterns of communication, and African academic traditions, programs, and campus cultures. P/NP or letter grading.


197. Individual Studies in African Languages. (1 to 6) Tutorial, four hours. Limited to juniors/seniors. Individual investigation of advanced level, usually unsu- vised research, based on needs of individual students, in any language or group of languages for which appropriate facilities are available. 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


596. Directed Studies. (1 to 8) Tutorial, to be arranged. Directed research. Four units may be applied toward M.A. course requirements. May be repeated for credit. S/U grading.

Applied Linguistics

Lower Division Courses

10. Language in Action: Perspectives from Applied Linguistics. (5) Lecture, three hours; discussion, two hours. Open for credit to students with credit for course 10W. Introduction of topics, approaches, research, and resources in interdisciplinary field of applied linguistics as it is practiced at UCLA. Series of presentations in various face-to-face contexts whose work is in those areas. Introduction to various ways language works in real life and how this can be described and studied in systematic ways; designed to teach students to gather evidence and draw conclusions. S/U grading.

10W. Language in Action: Perspectives from Applied Linguistics. (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 10. Introduction to rich variety of topics, approaches, research, and resources in interdisciplinary field of applied linguistics as it is practiced at UCLA. Series of presentations by various faculty members whose work is in those areas. Introduction to various ways language works in real life and how this can be described and studied in systematic ways; designed to teach students to write effectively. Satisfies Writing II requirement. Letter grading.

20. Ethical Issues in Language Assessment: Using Language Tests in Education and Society. (5) Lecture, four hours; discussion, one hour. Consideration of relevant linguistic concepts such as turn-taking and overlap as resources for analyzing second language interaction. Examination of how culture, ethnicity, and ownership of language affect test scores in high-stakes decision-making. What are the consequences? How are these decisions made? P/NP or letter grading.

30. Language and Social Interaction. (5) Lecture, four hours. Open for credit to students with credit for course 30W. Exploration of range of topics related to study of language and social interaction, 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 relational identity), and issues concerning language and culture (such as cross-cultural misunderstanding and language socialization). Satisfies Writing II requirement. Letter grading.

40. Language and Gender: Introduction to Gender Differences and Stereotypes. (5) Lecture, four hours; discussion, one hour. Open for credit to students with credit for course 40W or former course M40 or M40W. Introduction to language from sociological perspective of gender. Use of research and examples in English and other languages to explore nature of male and female “gendered” language behavior, language, as reflected in lexicon, language behavior, phonetics and intonation, and language acquisition and linguistic change. Fieldwork to be carried out in language of student choice. P/NP or letter grading.

40W. Language and Gender: Introduction to Gender and Stereotypes. (5) (Formerly numbered M40W) Lecture, four 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 40W or former course M40 or M40W. Prior knowledge of foreign languages not required. Introduction to language from sociological perspective of gender. Use of research and examples in English and other languages to explore nature of male and female “genderlects” and gendered language, as reflected in lexicon, language behavior, phonetics and intonation, and language acquisition and linguistic change. Satisfies Writing II requirement. Letter grading.

80. Language in Globalizing World: Second Language Interaction in Everyday Life and Academia. (4) Lecture, four hours. Open for credit to students with credit for course 80W. Introduction to language and social interaction, with specific emphasis on second language communication. Second or foreign language is considered highly important worldwide in personal, intellectual, and professional life. As important domain of research, second language interaction is widely studied by applied linguists, conversation analysts, and linguistic anthropologists with varying interests. Study of various interactional phenomena observed in second language interaction. Exploration of range of topics related to second language interaction. Discussion of second language interaction in various pedagogical settings. P/NP or letter grading.

80W. Language in Globalizing World: Second Language Interaction in Everyday Life and Academia. (5) Lecture, four 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 80W. Introduction to language and social interaction, with specific emphasis on second language communication. Second or foreign language is considered highly important worldwide in personal, intellectual, and professional life. As important domain of research, second language interaction is widely studied by applied linguists, conversation analysts, and linguistic anthropologists with varying interests. Study of various interactional phenomena observed in second language interaction. Examination of how culture, ethnicity, and ownership of language affect test scores in high-stakes decision-making. What are the consequences? How are these decisions made? Satisfies Writing II requirement. Letter grading.
88GE. Sophomore Seminar: Special Topics in Applied Linguistics. (5) Seminar, three hours. Enforced prerequisite: course 40 or 40W. Designed for sophomores/juniors. Exploration of aspects of lecture topic in critical areas of interest through readings, discussions, research, and fieldwork. P/NP or letter grading.

Upper Division Courses

100. Discourse and Society, (4) Lecture, four hours; discussion, two hours. Important contemporary perspectives for study of language in its social and cultural matrix. Topics include conversational organization, narrative, visual and nonverbal communication, language and social identity, ritual and institutional discourse. Focus on analysis of audio and video recordings of talk in variety of cultural settings. P/NP or letter grading.

101. Introduction to Language Learning and Language Teaching. (5) Lecture, four hours. Not open for credit to students with credit for course 101W. Exploration of skills and conditions involved in successful second and foreign language learning; application of this knowledge in development of framework for teaching second and foreign languages. Letter grading.

101W. Introduction to Language Learning and Language Teaching. (5) Lecture, four hours; discussion, one hour. Enforced prerequisite: English Composition 3 or 3H or English as a Second Language 36. Not open for credit to students with credit for course 101. Exploration of language learning process; involved in successful second and foreign language learning; application of this knowledge in development of framework for teaching second and foreign languages. Satisfies Writing II requirement. Letter grading.

102W. Nature of Learning. (5) Lecture, four hours; discussion, one hour. Enforced prerequisite: English Composition 3 or 3H or English as a Second Language 36. Exploration of learning via examination of second language acquisition. All normal children acquire language of their family and community (i.e., first language acquisition is ubiquitous). Success in second language acquisition is relatively variable, and many learners, in spite of substantial opportunity and ability, achieve proficiencies that fall far below that of native speakers. Examination of interaction of emotion and cognition and nature of attitude and motivation in learning. Primary vehicle for investigation to be autobiographies of second language learners. Satisfies Writing II requirement. Letter grading.

110. Methodology for Second/Foreign/Heritage Language Education. (4) Lecture, four hours. Requisite: Linguistics 20. Survey of theory and practice in teaching second/foreign/heritage languages, including (1) past and present methods used to teach second/foreign/heritage languages, (2) current theory and practice underlying skills-based instruction and integrated approaches, (3) factors that affect second language acquisition and learning, (4) development and evaluation of curricula and textbooks, and (5) rationale for and development of instructional materials and methods. P/NP or letter grading.


112. Reading for Second/Foreign/Heritage Language Education. (4) Lecture, four hours. Requisite: course 101W or C110. Survey of theoretical and methodological issues related to second/foreign/heritage language reading, including critical examination of classroom research and overview of issues in evaluating and responding to written text. Concurrently scheduled with course C211. P/NP or letter grading.

112SL. Teaching Reading in Second/Foreign/Heritage Language through Service Learning. (5) Lecture, four hours; fieldwork, four hours. Designed for second/foreign/heritage language teachers in training, with focus on important theoretical and methodological issues related to teaching of second language reading. Survey of current research and theory, as well as evaluation of readers' workshops and development of classroom materials. Students tutor foreign language and ESL students at selected service learning community partner sites and actively reflect on, analyze, and discuss ways in which they used skills and ideas presented in class and readings. They share observations with and make suggestions to one another regarding their service with goal of relating their experiences to current research and ensuring culturally responsive teaching. P/NP or letter grading.

C113. Phonetics for Second/Foreign/Heritage Language Education. (4) Lecture, four hours. Requisite: Linguistics 20. Examination of phonological structure of contemporary American English, with emphasis on appropriate techniques in teaching English as a second/foreign/heritage language environment in which to hone fundamental teaching skills such as conducting warm-up activities, managing student dynamics, eliciting student contributions, correcting errors, sequencing lesson components, and transiting between them. Concurrently scheduled with course C215A. P/NP or letter grading.

113SL. Phonetics for Language Education and Service Learning. (5) Lecture, four hours; fieldwork, four hours. Designed to give overview of phonetic features of North American English (NAE) that relate to teaching of English as a second/foreign/heritage language. Development of rationale for and development of instruction in teaching of pronunciation. Concurrently scheduled with course C213. P/NP or letter grading.

C114. Listening and Speaking for Second/Foreign/Heritage Language Education. (4) Lecture, four hours. Requisite: course 101W or C110. Survey of theoretical and methodological issues related to second/foreign/heritage language spoken discourse, including critical examination of research paradigms and classroom materials. Concurrently scheduled with course C214. P/NP or letter grading.

C115A. Media for Second/Foreign/Heritage Language Education. (4) Lecture, four hours. Requisite: course 101W or C110. Rationale and pedagogical application for using media equipment and materials in second/foreign/heritage language classroom. Training in standard classroom audio and video equipment, basic instruction and practice in preparing instructional packets and review of published media materials, with focus on their application to second/foreign/heritage language instruction. Concurrently scheduled with course C215A. P/NP or letter grading.

C115B. Computer-Enhanced Language Teaching and Learning. (4) Seminar, four hours; fieldwork, four hours. Requisite: course 101W or C110. Designed for students interested in computer-enhanced language learning in second/foreign/heritage language environments. Web-based teaching (basics of creating and maintaining class websites), designing computer-enhanced teaching materials (e.g., PowerPoint presentations), managing classroom data (e.g., Excel grade calculation), and creating electronic teaching portfolios, with focus on pedagogical rationale for classroom instruction and on professional development. Concurrently scheduled with course C215B. Letter grading.


C117. Literature in Second/Foreign/Heritage Language Education. (4) Lecture, four hours. Requisite: course 101W or C110. Survey of theoretical and methodological issues related to teaching literature to students in ESL/HER/ESL settings and evaluation of appropriate classroom materials. Strong emphasis on cultural literacy, for which required reading is scheduled with course C217. P/NP or letter grading.

C117SL. Teaching Literature in Language Education through Service Learning. (5) Lecture, four hours; fieldwork, four hours. Development of rationale for selecting, evaluating, and using literary works in second language or ESL/EFL settings. Students tutor foreign language and ESL students at selected service learning community partner sites and actively reflect on, analyze, and discuss ways in which they used skills and ideas presented in class and readings. Students share observations with and make suggestions to one another regarding their service with goal of relating their experiences to current research and ensuring culturally responsive teaching. P/NP or letter grading.

C118A. Fundamentals of Second/Foreign/Heritage Language Teaching. (5) Lecture, four hours. Requisite: course 101W or C110. Designed for students interested in microcomponents of effective second/foreign/heritage language teaching. In-depth examination of classroom management, implementation of lessons, and implementation of projects. Provides structured environment in which to hone fundamental teaching skills such as conducting warm-up activities, managing student dynamics, eliciting student contributions, correcting errors, sequencing lesson components, and transiting between them. Concurrently scheduled with course C118B. P/NP or letter grading.

C118B. Second/Foreign/Heritage Language Teaching Practicum. (4) Seminar, three hours; fieldwork, four hours. Requisites: courses 101W or C110, C116. Theoretical and practical concerns regarding second/foreign/heritage language teaching, with emphasis on fieldwork experiences and grounding of solutions to problems faced in current research in language education and language pedagogy. Concurrently scheduled with course C118A. P/NP or letter grading.


C119A. Seminar, four hours; C119B. Seminar, two hours. Formerly numbered 121. Seminar, three hours; tutoring, two 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.

M125. Language Socialization. (4) (Same as Anthropology M149E.) Seminar, four hours. 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. Letter grading.


M161W. Talk and Body. (5) (Same as Anthropology M148W and Communication Studies M129W.) Lecture, four hours; discussion, one hour. Enforced requisite: English Composition 1 or 2 or English as a Second Language 36. Relationship between language and human body holds interest of interesting topics. New approaches to phenomena such as embodiment become possible when body is analyzed, not as isolated entity, but as visible agent whose talk 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.

M165SL. Taking It to Street: Spanish in Community. (5) (Same as Spanish M165SL) Seminar, three hours; fieldwork, 10 hours. Requisite: Spanish 25 or 27. Service learning course to give students opportunity to use language skills acquired in Spanish classes in real-world settings. Students required to spend minimum of eight to 10 hours per week at on-site agreed on site in Latino community. P/NP or letter grading.

170. Field Methods in Discourse and Society. (4) Seminar, four hours. Ethnographic approaches to recording and analyzing communicative events and practices in their sociocultural context, including student-related fieldwork in community settings. Emphasis on hands-on activities within theoretical frameworks that consider language as social and cultural practice. Letter grading.

M172SL. Latinos, Linguistics, and Literacy. (5) (Same as Chicana and Chicano Studies M170SL, Honors Collegium M128SL, and Spanish M172SL.) Seminar, four hours; field project, four to six hours. Recommended requisites: research study of various topics related to literacy, including different definitions of literacy, programs for adult preliterate adults, literacy and gender, approaches to literacy (whole language, phonics, Freire’s liberation pedagogy), history of writing systems, phone 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.

C175. Critical Approaches to Multilingualism. (5) Seminar, four hours. Examination of how identities and social relationships are defined through language in multilingual societies, with focus on how they have been disrupted, modified, and/or (re)created in societies that have experienced colonialism. Assessment of effects of colonialism, linguistic politics (policies and ideologies) in verbal arts, media, education, government, and everyday conversation. How might critical applied linguistics contribute, for example, to understanding politics of language use in multilingual contexts? Concurrently scheduled with course C275. P/NP or letter grading.

195. Community Internships in Applied Linguistics and TESL. (5) Tutorial, one hour; fieldwork, 10 hours. 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. Letter grading.

197. Individual Studies in Applied Linguistics. (4) Tutorial, four hours. Enforced requisite: Individual intensive study for undergraduate students who desire more advanced or specialized treatment of issues in applied linguistics beyond those covered in current course offerings. Student should be able to devise a plan between faculty member and student. Assigned reading and tangible evidence of mastery of subject matter required. May be repeated for credit. Individual contract required. Letter grading.

198. Honors Research in Applied Linguistics and TESL. (4) Tutorial, four hours. Limited to juniors/senior. Development and completion of honors thesis or research project under direct supervision of faculty member. May be repeated for credit. Individual contract required. Letter grading.


Graduate Courses


C207. Ethnography of Communication. (4) (Same as Anthropology M242.) Lecture, three hours. Described for graduate students. Seminar 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 nonverbal communication behavior. S/U or letter grading.


C209. Introduction to Doctoral Studies in Applied Linguistics. (4) Seminar, four hours. Limited to Ph.D. students. Broad overview of fundamental and current philosophical issues in field of applied linguistics. Topical focus include methodology for applied linguistics, nature of language, symbolic and grammatical world, and criticality in applied linguistics research, critical applied linguistics, and approaches and methodologies for research in applied linguistics. Seminar devoted to illustrative research studies in applied linguistics. S/U grading.


C211. Writing for Second/Foreign/Heritage Language Education. (4) Lecture, four hours. Requisite: course 101W or C110. Survey of theoretical and methodological issues related to second/heritage language written discourse and composition for second/heritage language learners, including attention to classroom research and overview of issues in evaluating and responding to written text. Concurrently scheduled with course C111. Additional assignments required of graduate students. S/U or letter grading.


C216. English Grammar for Second/Foreign/Heritage Language Education. (4) Lecture, four hours; fieldwork, four hours. Requisite: course C210. Designed for students interested in computer-enhanced language learning in second/foreign/heritage language environments. Web-based teaching (basics of creating and maintaining class websites), designing computer-enhanced teaching materials (e.g., PowerPoint presentations), managing classroom data (e.g., Excel grade calculation), and creating electronic teaching portfolios, with focus on pedagogical rationale for classroom instruction and on professionalizing current second/foreign/heritage language teaching methods through application of computer technology. Project-based seminar to encourage participants to develop materials, either individually or collaboratively, for their current or intended teaching settings/populations. Concurrently scheduled with course C216B. Letter grading.


C218. Fundamentals of Second/Foreign/Heritage Language Teaching. (4) Seminar, four hours. Requisite: course C210. Designed for students interested in microteaching and development of second/foreign/heritage language teaching. In-depth examination of decision-making process underlying planning and implementation of lessons. Provides structured environment in which students experience teaching skills, such as conducting warm-up activities, managing student dynamics, eliciting student contributions, correcting errors, sequencing lesson components, and transitioning between them. Concurrently scheduled with course C211A. Letter grading.

C218B. Second/Foreign/Heritage Language Teaching Practicum. (4) Seminar, three hours; fieldwork, four hours. Requisites: courses C210, C216. Theoretical and practical concerns regarding second/foreign/heritage classroom instruction, on fieldwork experiences and grounding of solutions to problems faced in current research in language education and language pedagogy. Concurrently scheduled with course C211B. Letter grading.

C219A-C219B. Current Issues in Second/Foreign/Heritage Language Education. (4-2) Requisite: course C210. Specialized topics in language education and current issues pertaining to the theoretical concern in field of second/foreign/heritage language education. May be repeated for credit with topic change. Concurrently scheduled with courses C211A-C211B. Additional assignments required of graduate students. S/U or letter grading. C219A. Seminar, four hours; C219B. Seminar, two hours.


C222. Discourse-Centered Language Learning. (4) Seminar, four hours. Requisite: course C202. Case-study and project-based research seminar on classroom language learning with authentic discourse input (usually in form of video and audio recordings of natural spoken discourse). Development of theoretical and technical skills in designing, conducting, and reporting learning from such recordings and how this learning might be facilitated, based on current second language acquisition research. Letter grading.

C223. Topics in Psycholinguistics. (4) Seminar, four hours. Requisite: course C202. Detailed examination of specialized topics in psycholinguistics. Topics vary from year to year and may include language and cognitive science, theories and types of bilingualism, learning disabilities, concerns in second language teaching, sometimes focusing on language-specific versus universal concerns. May be repeated for credit with topic change. Letter grading.

C224. Language Socialization. (4) Same as Anthropology M293S, Education M285, Psychology M247. Seminar, three hours. Designed to help students become exposed to current research and theory in the field of language socialization and sociocultural and intercultural aspects of language and communication, including both applied and theoretical aspects of interlanguage from various points of view (e.g., topic-specific comparison, interlanguage contrast, interaction of morphology, syntax, semantics, and pragmatics). S/U or letter grading.

C225. Current Issues in Language Assessment. (4) Seminar, four hours. Requisite: course C224. Advanced seminar on language acquisition in which course-specific and discipline-specific topics (e.g., development of interlanguage, textual structure of utterances, and interlanguage change). Specialized topics of interest to graduate students. S/U or letter grading.


C231. Crosslinguistic Topics in Language Acquisition. (4) Seminar, four hours. Requisite: course C226. Advanced seminar on language acquisition in which crosslinguistic variables and pedagogical applications are explored in terms of variation across different languages. S/U or letter grading.
250. Advanced Seminar: Language Assessment. (4) Seminar, four hours. Requisite: courses C204, C241. Design and administration of technical assessment such as reliability, validation, criterion-referenced assessment, generalizability theory, item-response theory, or program evaluation to language assessment in depth. Topics vary. May be repeated for credit with topic change. S/U or letter grading.

258. Assessment Laboratory. (4) Laboratory, four hours. Collaborative coursework, with focus on specific theoretical and applied issues in development of innovative language assessment procedures for use in real-world settings. Specific projects determined by research being conducted by working group in language assessment. Activities include designing and developing measurement instruments, gathering and analyzing data, and interpreting and reporting results. May be repeated for credit with topic change. S/U or letter grading.

M262. Topics in Communicative, Cognitive, and Functional Approaches to Linguistic Analysis. (4) (Same as German M264.) Seminar, three hours. Requisite: German C142 or C238. Readings, discussion, analyses, and validation procedures within sign-based linguistic analyses, cognitive grammar, and discourse-functional approaches to language. Consideration of impact of grammaticalization theory on various nonformal approaches to language. Discussion of processes of grammaticalization by Contini-Morava, Diver, Garcia, Goldberg, Janssen, Lakoff, Langacker, and Verhagen, as well as Bybee, Traugott, Hopper, and others. S/U or letter grading.

263. Crosslinguistic Topics in Functional Grammar I: Typology. (4) Seminar, four hours. Survey of particular linguistic area from typological perspective within functional grammar framework. Topics include tense/mood/aspect, nominal reference, word order. May be repeated for credit with topic change. S/U or letter grading.

264. Crosslinguistic Topics in Functional Grammar II: Discourse. (4) Discussion, four hours. Requisite: course C262 or C263. Examination of selected linguistic features of oral and written texts that go beyond sentence level and thus signal cohesion. Study of structures to determine their function in variety of English texts representing several discourse types. Letter grading.

267. Talk and Body. (4) Seminar, four hours. Requisite: course C203 or C204. Focus on interactional phenomena in language use. Topics include speech acts, deixis, proxemics, body language, and their role in discourse organization and the management of social meaning. Letter grading.

270A. Ethnographic Technologies Laboratory I. (4) (Same as Anthropology M249A-) Laboratory, three hours. Corequisite: course C270A or Anthropology M249A. Seminar, four hours. Focus on hands-on activities within theoretical framework that consider language as social and cultural practice. S/U grading. May be repeated for credit with topic change. S/U grading.

270B. Ethnographic Technologies Laboratory II. (4) (Same as Anthropology M249B.) Laboratory, four hours. Corequisite: course C270B or Anthropology M249B. Seminar, four hours. Focus on hands-on activities within theoretical framework that consider language as social and cultural practice. S/U grading. May be repeated for credit with topic change. S/U grading.


273. Grammar and Discourse Practicum. (4) (Same as Anthropology M246B.) Seminar, four hours. Requisite: course C272. Seminar on applied linguistics to grammatical and discourse, including predicates, argument structures and discourse relations, noun phrase categorization, case marking, verbal categories, topic marking devices, registers and speech varieties, reported speech, genre and text structure in discourse. Preparation and analysis of data from range of languages. S/ U or letter grading.


275. Critical Approaches to Multilingualism. (5) Seminar, four hours. Examination of how identities and social relationships are defined through language in multilingual societies, with focus on how they have been disrupted, modified, and/or (re)created in socie- ties that have experienced colonialism. Assessment of effects of colonial and postcolonial language politics (polities and ideologies) in verbal arts, media, educa- tion, government, and popular culture. How might critical applied linguistics in general, and postco- lonial theory in particular, help to better understand politics of language use in multilingual contexts? Con- currently scheduled with course C175. S/U or letter grading.

278. Discourse Laboratory. (4) Laboratory, four hours. Requisite: course M206. Designed for Applied Linguistics Ph.D. students. Advanced procedures in data analysis in field of discourse analysis, including development of large-scale research project and critical review of current research. May be repeated for credit. S/U grading.

281. Linguistics of Translation and Interpreting. (4) Seminar, four hours. Preparation: excellent knowledge of English and one other language. Requisite: Linguistics 20. Translation and interpretation are complex activities that occur at intersection of linguistic, cognitive, social, and cultural human activities and are becoming increasingly important in globalizing world in which they figure not only in traditional arena of literary translation, but in virtually all arenas of cultural, social, political, and economic life. Examination of main applied linguistic aspects of translation and interpreting across wide range of theoretical, methodological, and practical perspectives. S/U or letter grading.

288. Functional Grammar Laboratory. (4) Laboratory, four hours; fieldwork, as scheduled. Design and analysis of data that is naturally occurring, made up by participants and/or their native informants, on various historical and/or contemporary communities. Hypothesis based on observable data, test it by experimenting with sentences and using native input, and generalize from their conclusions. Students provide critical approaches to applied linguistics, including critical approaches to applied linguistics, including critical discursive analysis of one or another language. Emphasis on discussion of real-world phenomena, and carry out contrastive research on discourse-pragmatic problems detected in one or another language. Emphasis on student carrying out one particular project in collaboration with and benefitting from critical feedback by fellow students. Hands-on analysis rather than reading of secondary literature. S/ U grading.

291. Current Issues in Applied Linguistics. (4) Seminar, four hours. Specialized topics in applied linguistics of current relevance. Emphasis varies according to current topics of theoretical concern in field. May be repeated for credit with topic change. S/U or letter grading.


375. Teaching Apprentice Practicum. (1 to 4) Seminar, four hours. Requisite: course C175. Preparation: apprentice personnel, 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. Applied Linguistics M.A. Colloquium. (4) Seminar/student presentations, to be arranged. M.A. candidates present and defend research culminating in research. Required of all candidates but may not be applied toward M.A. degree requirements. Candidates for Ph.D. in Applied Linguistics may also use this course to report on their dissertations. S/U grading.

495. Training and Supervision of Teaching Assistants. (2) Seminar, two or more hours. Required of all teaching assistants. Orientation, preparation, and supervision of teaching assistants. Various topics, includ-
Ch10. Ancient and Historic Metals: Corrosion, Technology, and Microstructure. (6) Seminar, four hours; laboratory, four hours. Laboratory 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 past 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. Metallographs that 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 archaeology 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 M.A. thesis or Ph.D. 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-report presentations, 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. Topics 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.

M205B. Intensive Laboratory Training in Archaeology. (6) (Same as Anthropology M212T.) 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.


C210. Special Topics in Archaeology. (2 or 4) Lecture, three hours. Designed for juniors/seniors. Special topics on theoretical subjects in archaeology such as new strategies, 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 of one month of field time away from campus required. May be repeated for credit with consent of adviser. Concurrently scheduled with course C229. P/NP or letter grading.
C220. Special Topics in Archaeology. (2 or 4) Lecture, three hours. Special topics on theoretical subjects in archaeology such as new strategies, regional synthesis, or current work by core program faculty or special visiting scholar. May be repeated for credit with topic change. Concurrently scheduled with course C120. Final project or paper required if taken for 4 units (S/U or letter grading); 2-unit course has S/U grading.

C259. Fieldwork in Archaeology. (2 to 12) Fieldwork, to be arranged. Participation in archaeological field excavations or museum research under supervision of staff or archaeologists at UCLA. Minimum of one month of field time away from campus required. May be repeated for credit with consent of adviser. Concurrently scheduled with course C159. S/U or letter grading.

M265. Depositional History and Stratigraphic Analysis. (4) (Same as Ancient Near East M265.) Lecture, two hours. Theoretical understanding of depositional processes ("laws") which lead to site formation and of stratigraphic procedures to be used in recovery of embalmed cultural materials. Study of issues covered in literature, with specific test cases from actual excavations and site reports. Coverage of theoretical implications of such disciplines as surveying and pedology with help of specialists. S/U or letter grading.

C280. 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-lin bronze alloys, bronzes, Peruvian, Colombian, Costa Rican, and Panamanian copper and gold-copper alloys. Concurrently scheduled with course C180. Letter 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 Studies for Graduate Students. (2 to 12) Tutorial, to be arranged. May be repeated for credit with consent of adviser. S/U or letter grading.

597. Preparation for Ph.D. Qualifying Examinations. (2 to 12) Tutorial, to be arranged. Preparation: completion of formal coursework, passing of language examinations before enrollment. May be repeated for credit with consent of adviser. S/U grading.

598. M.A. Paper Preparation. (2 to 12) Tutorial, to be arranged. May be repeated for credit with consent of adviser. S/U grading.


ARCHITECTURE AND URBAN DESIGN

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Jason K. Payne, M.Arch.
Heather L. Roberge, M.Arch.

Adjunct Professor
Alan Locke, M.Sc.

Adjunct Associate Professor
Roger Sherman, M.Arch.

Undergraduate Study

Architectural Studies B.A.

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 Preparatory 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 Preparatory for the Major courses during their first year in residence. All applicants must submit a statement of interest and three 8x10 images of creative work. Applications are available in the department office to regularly enrolled UCLA students during the previous Fall Quarter. For further information, consult the undergraduate adviser.

Preparation for the Major

The Major
Required: Architecture and Urban Design 121, 122, 123, 131, 132, 133, 141, 142, 143.
103. Introduction to Architectural Design. (6) Studio, 18 hours. Limited to currently enrolled college/university students or letter enrolled 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 a design 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 those problems. Offered in summer only. Letter grading.

121. Studio I. (6) Studio, eight hours; 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 a 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.

122. Studio II. (6) Studio, eight hours; outside study, 10 hours. Enforced requisite: course 121. Limited to Architectural Studies majors. Issues of inhabitation, domesticity, and program. Architectural precedents and principles that apply to design of built domain that ranges in scale from details to cities. While canon of Western traditions or social sciences using skills learned in courses 121, 122. Limit to Architectural Studies majors.

123. Studio III. (6) Studio, eight hours; outside study, 10 hours. Enforced requisites: courses 121, 122. Limited to Architectural Studies majors. Introduction to disciplinary issues, techniques, and organizations of landscape and how those can influence design of building and site. Development of material and temporal characteristics of architecture relative to the role those play in landscape. Issues of accessibility and egress as systems of movement. Structure as a formal 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, Hypercities, and Timelines. (4) Same as Ancient Near East M125B.) Laboratory, three hours; discussion, one hour. Enforced requisite: course 121, 122. Limited to Architectural Studies majors. Introduction to disciplinary issues, techniques, and organizations of landscape and how those can influence design of building and site. Development of material and temporal characteristics of architecture relative to the role those play in landscape. Issues of accessibility and egress as systems of movement. Structure as a formal component that relates to site, construction, topography, climatology, accessibility, and their mutual interaction. Letter grading.

M125C. Digital Cultural Mapping Core Course C: Summer Research. (4) Same as Ancient Near East M125C.) Laboratory, three hours; fieldwork, one hour. Enforced requisite: course M125B or Ancient Near East M125B. Participation in collaborative geoinformatics and multidisciplinary 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 demonstrates student's understanding of analysis of source material and technological/methodological issues inherent to type of GIS used for investigation.
systems approach, with focus on sustainable design 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 CM247A. Letter grading.

M170. Human Environment: Introduction to Architecture and Urban Planning. (4) (Same as Urban Planning M170.) Lecture, three hours; outside study, nine hours. Kinds of problems that arise in creating and maintaining environment for urban activities, and approaches and methods of architecture and urban planning in helping to cope with such problems. Complexities involved in giving expression to human needs and desires in provision of shelters and movement systems, to possibilities and limitations of technology and building forms, and to issues involved in relating human-made to natural environment. Students encouraged to comprehend major urban developments such as citizens and as potential technical experts. P/NP or letter grading.

199. Directed Research or Senior Project in Architecture and Urban Design. (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

M201. Theories of Architecture. (4) (Same as Urban Planning 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 of current issues in architectural theory. Readings in primary texts serve as framework for understanding nature of speculative inquiry in architectural context. Letter grading.

220. Introduction to Computers. (2) Lecture, 90 minutes; laboratory, 90 minutes; outside study, three hours. Introduction to basic concepts, skills, and theoretical aspects of computer-aided architecture design microcomputer skills. Applications selected are commonly found in professional offices. Two- and three-dimensional representation (i.e., painting, drafting, multimedia, hypermedia, and modeling). Letter grading.

M226A. Introduction to Computer-Aided Architectural Design, Two-Dimensional. (4) (Same as Urban Planning M226A.) Lecture, three hours; laboratory, one hour. Concepts of hardware, software, and networks; paint, draft, multimedia, DTP, and presentation programs; 2D design. 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.

M227A. Programming Computer Applications in Architecture and Urban Design. (4) (Same as Design I Media Arts M224.) Lecture, three hours; outside study, nine hours. Introductory course in logic of computing through practical experience in computer graphics programming. Investigation of both procedural and object-oriented approaches to programming. May be repeated for credit with consent of adviser. S/U or letter grading.

M227B. Introduction to Geometric Modeling. (4) (Same as Design I Media Arts M224.) Lecture, three hours; outside study, nine hours. Requisite: course M222A. Shaded and three-dimensional modeling, with emphasis on implementation of three-dimensional solids constructions and editing operations. Basic representations and operations on shapes and solids. May be repeated for credit with consent of adviser. S/U or letter grading.

M227C. User Interaction Techniques in Design. (4) (Same as Design I Media Arts M224.) Lecture, three hours; outside study, nine hours. Requisite: course M222A or knowledge of C++ programming language. Programming techniques for implementing modern computer-user interfaces, specifically looking at issues relevant to building software tools for constructible problem solving in architecture and design. May be repeated for credit with consent of adviser. S/U or letter grading.

227D. Design and Building Models. (4) Lecture, three hours. Review of range of information and knowledge potentially used in design. Knowledge representation, abstractions, and constructs. Logical structure of design information. Development of knowledge used in areas of design, how it can be identified, analyzed, and structured. Letter grading.

CM247A. Introduction to Sustainable Architecture and Community Planning. (4) (Same as Urban Planning M247A.) Lecture, three hours. Relationship of built environment to natural environment through whole systems approach, with focus on sustainable design 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 M229.) Lecture, three hours. Introduction of basic knowledge of elements and methods of urban design. Multidisciplinary approach leading to understanding of political, economic, 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 M227.) 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 making, project feasibility, loan packages, development plan, and feasibility studies. Lectures and projects integrate development process with proposed design solutions that are interactively modeled 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 from 15th to 17th century. Primary focus on Italian peninsula, and extending to entire Mediterranean basin. Analysis of individual structures, cities, and landscape designs to reveal changing cultural and theoretical values, as well as specific aesthetic and iconographic content. S/U or letter grading.

287. Renaissance Architecture and Urbanism. (4) Lecture, three hours. 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 designs to reveal changing cultural and theoretical values, as well as specific aesthetic and iconographic content. S/U or letter grading.

288. Architecture and Community Planning. (4) Lecture, three hours. Examination of architectural development from 15th to 17th century. Primary focus on Italian peninsula, and extending to entire Mediterranean basin. Analysis of individual structures, cities, and landscape designs to reveal changing cultural and theoretical values, as well as specific aesthetic and iconographic content. S/U or letter grading.

289. Special Topics in Architecture and Urban Design. (2 to 4) Lecture, two hours; discussion, two hours. Selected academic topics initiated by students, student project teams, or by faculty member. May be repeated for credit. S/U or letter grading.

290. Special Topics in Critical Studies in Architectural Culture. (5) Lecture, three hours; discussion, one hour. Outside study, nine hours. Requisite: course 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 interrelation to design process; planning of design process; various techniques for determination of contents, basic conditions, resources, and constraints; identification of solution types for given situations. S/U or letter grading.

M293. Politics, Ideology, and Design. (4) (Same as Urban Planning M293.) Lecture, three hours. Exploration of cultural and political context of architecture and planning work. Examination of theory and practice from variety of perspectives applied to set of varied physical environments and to set of current 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) Lecture, eight hours. Introduction to environmental psychology, and theories and concerns impacting environment of 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 territoriality. S/U or letter grading.

296. Proseminar: Critical Studies in Architectural Culture. (4) Lecture, four hours. Introduction to philosophical underpinnings and supervision of regular faculty member responsible for curriculum and instruction 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) or M.Arch. II student. Students may choose (through lottery) from several different advanced studio projects focusing on special topics in architectural and urban design to be offered by faculty members. Exit document (portfolio) required. Letter grading.

402. Final Advanced Topics Studio. (6) Studio, 12 hours; outside study, six hours. Preparation: satisfactory completion of intermediate-level studios and fourth-term standing for M.Arch. II student. Course 403A is required 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.

M404. Joint Planning/Architecture Studio. (4) (Same as Urban Planning M404.) 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 include Third Street Housing; Santa Monica; New American House for nontraditional households; Pico-Aliso Housing, Boeing Heights; working with resident leaders at Los Angeles City public housing developments. S/U or letter grading.

411. Introductory Design Studio. (6) Studio, 12 hours; outside study, six hours. Introduction to sketching, drawing, perspectives, CAD. Architectural composition is initially studied in terms of its separate elements, and then each is studied by means of an exploratory exercise that allows for experimentation of its intrinsic possibilities, students undertake series of closely controlled exercises dealing with combining elements and then design small buildings. Letter grading.
412. Building Design Studio. (6) Studio, 12 hours; outside study, six hours. Requisite: course 411. Concentration: building design. 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 elements to fulfill program requirements and to support and further develop intended forms and concepts. Letter grading.

413. Building Design with Landscape Studio. (6) Studio, 12 hours; outside study, six hours. Requisite: course 412. Introduction to theoretical and technical issues such as site planning, urban design, landscape design, building typology. Building design and site planning in relation to water, landforms, and plants in natural light, heat, and ventilation. Letter grading.

414. Major Building Design Studio. (6) Studio, 12 hours; outside study, six hours. Requisite: course 413. Designed for second-year graduate students. Introduction to issues such as programming and program manipulation, site planning, urban design, and integration of technical systems and architectural expression. Emphasis either on treatment in breadth of large-scale projects or preservation. On depth and role of earth-scale projects. Students learn to integrate structural 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. Requisite: course 414. Culmination of core sequence (courses 411 through 414), with focus on development phase of project. Technical concepts such as structural and material innovation, sustainability, construction documents, and building envelopes to be considered critical to generation of architectural form, integrated in design of single building project. Letter grading.


436. Introduction to Building Construction. (2) Laboratory, three 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 landform 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 production of 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.

596. Directed Individual Research and Study in Architecture and Urban Design. (2 to 8) Tutorial, to be arranged. May be repeated for credit. S/U grading.

597. Preparation for Comprehensive Examination or Ph.D. Qualifying Examinations. (2 to 8) Tutorial, to be arranged. May be repeated for credit. S/U grading.


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Mary Kelly, M.A.
Barbara Kruger
Wendy Maruyama, M.F.A.

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Raymond B. Brown, M.A.
Christopher L. Burden, M.F.A.
Elliot J. Elgart, M.F.A.
Paul D. McCarthy, M.F.A.
Nancy J. Rubins, M.F.A.

Assistant Professor
Rodey T. McMillan, M.F.A.

Lecturer
Don D. Suggs, M.F.A.

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 department provides 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 painting and drawing, new genres, photography, sculpture, and ceramics. An interdisciplinary studio option is offered within the M.F.A. 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 of its galleries 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 B.A.

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 M101A through C180C, one capstone senior studio course (Art 150), and 10 units of art electives.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available through the Graduate Division website, http://www.gdnet.ucla.edu/gasalibrary/pgmrqintro.htm. 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 (M.F.A.) degree in Art.

Art

Lower Division Courses

1A. Drawing. (4) 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. (4) 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. (4) 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. (4) Studio, eight hours; five hours arranged. Fundamentals in technique, with emphasis on individual projects. Varieties of approaches, processes, and applications of photographic medium within context of art, supported by studies in theory, aesthetics, and history of photography. P/NP or letter grading.

11C. Printmaking. (4) 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. (4) Studio, eight hours; five hours arranged. Introduction to projects in installation, performance, video, film, and other nontraditional media and processes. P/NP or letter grading.

11E. Ceramics. (4) 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. P/NP or 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. Requisite for Art majors: course 31A. 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. Requisites for Art majors: courses 31A, 31B. 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. (3) Studio, five hours arranged. Introductory survey of various technical and historical studies and their relationship to practicing artists. May be repeated for maximum of 20 units. Letter grading.

100. Issues in Contemporary Art. (5) Lecture, three hours; discussion, one hour; screenings/research, 11 hours. Requisites: courses 31A, 31B, 31C. Selected topics in theoretical, critical, aesthetic, and historical studies and their relationship to practicing artists. May be repeated for maximum of 20 units. Letter grading.

130. Advanced Drawing. (5) Studio, eight hours; seven hours arranged. Requisite: course 1A. Drawing as both independent expressive medium and as means of visualization. May be repeated for maximum of 20 units. Letter grading.

133. Advanced Painting. (5) Studio, eight hours; seven hours arranged. Requisite: course 11A. Varied media and subjects to further develop students’ technical and expressive means to implement their ideas. May be repeated for maximum of 20 units. Letter grading.

134. Survey of Critical Thought. (5) Lecture, three hours; discussion, one hour; screenings/research, 11 hours. Requisites: courses 31A, 31B, 31C. Overview of premodern, modern, and postmodern theory as reflected in criticism of art and writing, and practice, with emphasis on 1940s to present. Specific topics may vary. May be repeated for maximum of 20 units. Letter grading.

137. Advanced New Genres. (5) Studio, eight hours; seven hours arranged. Requisite: course 11D. Emphasis to be placed on faculty members from one or more of following media: installation, performance, video, film, other nontraditional media and processes. May be repeated for maximum of 20 units. Letter grading.

140. Advanced Printmaking. (5) Studio, eight hours; seven hours arranged. Requisite: course 11C. Select ed studies in fine printmaking, historical and contemporary: woodcut, etching and engraving, lithography, silk screen, mixed media. May be repeated for maximum of 20 units. Letter grading.

143. Advanced Sculpture. (5) Studio, eight hours; seven hours arranged. Requisite: course 1B. Selected students to further develop students’ technical and expressive means to implement their ideas. May be repeated for maximum of 20 units. Letter grading.

145. Advanced Sculpture. (5) Studio, eight hours; seven hours arranged. Requisite: course 1B. Selected students to further develop students’ technical and expressive means to implement their ideas. May be repeated for maximum of 20 units. Letter grading.

147. Advanced Photography. (5) Studio, eight hours; seven hours arranged. Requisite: course 11B. Selected projects in photography and related media, concentrating on development of independently conceived artwork. Studio emphasis with special topics in theory and critical analysis. May be repeated for maximum of 20 units. Letter grading.

148. Advanced Ceramics. (5) Studio, eight hours; seven hours arranged. Requisite: course 11E. Select ed studies in ceramics, with emphasis on individualized creative experimentation with materials and techniques introduced in course. Methods and processes to be selected from range of possibilities, including handforming and modeling, preparation and use of molds, slip-casting, and use of potter’s wheel. May be repeated for maximum of 20 units. Letter grading.

150. Senior Studio. (5) Studio, eight hours; seven hours arranged. Limited to seniors. Advanced studio projects, with emphasis on analysis and criticism of individual creative work and ideas. Letter grading.

170. Special Topics in Studio. (2 to 4) Studio/museum visits, four to eight hours arranged. Current themes in art theory, practice, and criticism, offering students opportunity to explore these issues in studio context through critique of work and discussion of recommended readings. May be repeated for maximum of 16 units. P/NP or letter grading.

C180. Seminar: Art. (4) Seminar, three hours. Preparation: at least one course from 100 through 150. Examination of contemporary art and its associated field of publications as intertextual system of meaning, beginning with individual works and proceeding to on-site analysis of current exhibitions. Concurrently scheduled with course C281. Letter grading.

C182. Exhibitions and Public Programs. (4) Seminar, four hours. Preparation: at least one course from 100 through 150. Introduction to principles of program planning and community development in relation to visual arts and work of art museums. Concurrently scheduled with course C282. Letter grading.

C183. Special Topics in Art. (2 or 4) Seminar, six hours (2-unit course) or 12 hours (4-unit course). Preparation: at least one course from 100 through 150. Selected topics in art explored through variety of approaches that may include projects, readings, discussions, research papers, and/or field trips. Topics to be announced in advance. May be repeated for credit. Concurrently scheduled with course C283. Letter grading.

M184. Chicana Art and Artists. (4) (Same as Chicana and Chicano Studies M175 and World Arts and Cultures M128.) Lecture, four hours. Introduction to Chicana and artists. Examination of Chicana aesthetics. Chicana artists have developed unique experience and identity as artists and Chicanas. Letter grading.

M185. Beyond Mexican Muralism: Beginning Muralism and Community Development. (4) (Same as Chicana and Chicano Studies M185 and World Arts and Cultures M125A.) Studio/lecture, four hours. Preparation: course M186A, M186B, or M186C. Examination of public monuments in U.S. as basis for cultural insight and critique of American values from perspective 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 defines neighborhoods, and do different ethnic populations use public space differently. P/NP or letter grading.

M186A. Beyond Mexican Mural: Muralism and Community. (4) (Same as Chicana and Chicano Studies M186A and World Arts and Cultures M125A.) Lecture, four hours. Preparation: course M186A, M186B, or M186C. Examination of public monuments in U.S. as basis for cultural insight and critique of American values from perspective 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 defines neighborhoods, and do different ethnic populations use public space differently. P/NP or letter grading.

M186AL-M186BL-M186CL. Beyond Mexican Mural: Muralism and Community Laboratory. (4-4-2) (Same as Chicana and Chicano Studies M186AL, M186BL, and World Arts and Cultures M125AL-M125BL-M125CL.) Studio course M186AL is requisite to M186BL, which is requisite to M186CL. Mural and Digital Laboratory is at art studio housed at Social and Public Art Resource Center in Venice, CA, where students work in community-based setting. Open to students work in community-based setting. Open to
students during scheduled hours with laboratory tech support, it offers instruction as students independently and in collaborative teams research, design, and produce large-scale painted and digitally generated murals to be placed in community setting. P/NP or letter grading. M186AL. Beginning. Laboratory, four hours. Corequisites: courses M186A, M186AL. Corequisite: course M186AL. Intermedia. Laboratory, four hours. Requisites: courses M186A, M186AL. Corequisite: course M186B; M186CL. Advanced. Laboratory, two hours. Corequisite: course M186C.

M186B. Beyond Mexican Mural: Intermediate Murals and Community Development. (4) (Same as Chicana and Chicano Studies M186B and World Arts and Cultures M125B.) Studio/lecture, four hours. Requisites: courses M186A, M186AL. Corequisite: course M186B. Continuation of investigation of muralism as method of community education, development, and empowerment. Exploration of issues through development of large-scale collaborative digitally created imagery and/or painting for placement in community. Students research, design, and work with community participants. Continuation of project through installation, documentation, and dedication, with work on more advanced independent projects. P/NP or letter grading.

M186C. Beyond Mexican Mural: Advanced Muralism and Community Development. (4) (Same as Chicana and Chicano Studies 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 education, development, and empowerment. Exploration of issues through development of large-scale collaborative digitally created imagery and/or painting for placement in community. Students research, design, and work with community participants. Continuation of project through installation, documentation, and dedication, with work on more advanced independent projects. P/NP or letter grading.

C187. Contemporary Art Collections in Los Angeles. (2) Seminar, three hours; outside study, three hours. Limited to junior/senior Art majors. Exploration of critical issues regarding concept of collections and collections as a means of extending students’ research, design, and work with community participants. Continuation of project through installation, documentation, and dedication, with work on more advanced independent projects. P/NP or letter grading.

190. Studio/Research Colloquia in Art in Art. (1) Seminar, three hours. Corequisite: course 197 or 198. Limited to juniors/seniors. Designed to bring together students undertaking supervised studio projects or research projects 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 maximum of 4 units. P/NP grading.

193. Journal Club Seminars: Current Topics in Art. (1) Seminar, three hours. Limited to junior/senior Art majors. Discussion of selected current exhibitions, visiting artist lectures, screenings, and research development of large-scale collaborative digitally created imagery and/or painting for placement in community. May be repeated for credit with consent of adviser. Letter grading.

196. Tutorials. (4) Tutorial, to be arranged. Preparation: 3.0 grade-point average in major. Individual intensive studio project or study, with scheduled meetings to be arranged between faculty member and student. Tangible evidence of project or mastery of subject matter required. May be repeated for maximum of 8 units. Individual contract required. Letter grading.

198. Honors Research in Art. (2 to 4) Tutorial, to be arranged. Preparation: 3.0 grade-point average and/or painting for placement in community. May be repeated for maximum of 8 units. Individual contract required. Letter grading.

Graduate Courses

271. Graduate Painting. (2 to 8) Studio, eight hours. Study in painting and associated media. May be repeated for credit with consent of adviser. Letter grading.

272. Graduate Printmaking. (2 to 8) Studio, eight hours. Studies in traditional and experimental printmaking. Selected studies in intaglio, lithograph, 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 discipline. Individual studio visits and conversations. May be repeated for credit with consent of adviser. Letter grading.

274. Graduate Photography. (2 to 8) Studio, eight hours. Studies concentratong on development of individual students' artwork. Studio emphasis with adjacency in the field of study. 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 and experimental processes and intellectual approaches to art. Selection of ceramic media, techniques and use of clay. Critical assessment of work. 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.

280. Seminar: Art. (4) Seminar, three hours. Advanced topics in critical theory and practice of contemporary art, with emphasis on new techniques, methodologies, and vocabularies of research. Open to students with special permission. May be repeated for credit. Concurrently scheduled with course C180. Letter grading.

281. Exhibition and System. (4) Seminar, four hours. Examination of temporary exhibition and its associated field of publications as an integral system of organizing, with beginning with individual works and proceeding to on-site analysis of current exhibitions. May be repeated for credit. Concurrently scheduled with course C181. Letter grading.

282. 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 to 4) Seminar, six hours. Study in art explored through various 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 collections as a means of extending students’ research, design, and work with community participants. Continuation of project through installation, documentation, and dedication, with work on more advanced independent projects. P/NP or letter grading.

C289. The Art History Program: Preparatory 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.

59. 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.

59. Preparation for Master’s Comprehensive Examination. (2 to 12) Tutorial, to be arranged. May not be applied toward M.A. or M.F.A. course requirements. May be repeated. S/U grading.
Art History

Group A (three courses total) and one course from three different areas in Group B (three courses total):


Five art history electives selected from courses 100 through 180C are required; course 197 may also be included.

Two additional terms of a foreign language are also required, which in addition to the College foreign language requirement. For example, if French was used to satisfy the College foreign language requirement, two terms of either advanced French or any level of a second language must be taken to satisfy the foreign language requirement for the major.

Art History majors should be aware that the upper division course requirements in the major (44 units) do not meet the upper division requirement of 60 units for graduation. Additional upper division units must be taken to reach the 60-unit total.

It is recommended that students have each term’s program approved by the departmental adviser.

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 academic standing with an overall grade-point average of 2.0 or better, have completed 45 units, and file a petition with the student affairs officer in 206A Dodd Hall, (310) 825-3992. Students are advised to declare the minor early and meet with the student affairs officer to plan a coherent program.

Required Lower Division Courses (15 units):

- Three courses selected from Art History 50, 51, 54, 55A, 55B, 56A, 56B, 57.

Required Upper Division Courses (20 units):

- Five art history courses, with at least two from each group:


ous disciplines in the College of Letters and Science and School of the Arts and Architecture. The program exposes students to museum studies as historically and currently practiced in the visual arts, in anthropology and ethnography, and in history and cultural studies more broadly. The minor complements and in part may serve as an introduction to the M.A. concentration in museum studies.

To enter the minor students must be in good academic standing (minimum 3.0 cumulative grade-point average), have completed 45 units at UCLA, and file a petition with the student affairs office in 206A Dodd Hall, (310) 825-3992.

Required Lower Division Courses (8 units): Anthropology 9 or 33 and one course from Art History 50 through 57, with grades of B or better.

Required Upper Division Courses (28 units): Art History C103A, C103B, World Arts and Cultures 143A, 143B, and three elective courses selected from Art History 100, C103C, World Arts and Cultures 143C, and a wide range of other courses from various departments and programs, with approval of the program director. Courses from other departments and programs may be applied as electives on an individual case basis only.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major or minor requirements in another department or program, 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 the departmental 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. 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 Study broadly. The program is available at the Graduate Division website, http://www.gdn.tedu.edu/gasla/library/pgmgrintro.htm. 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 (M.A.) and Doctor of Philosophy (Ph.D.) degrees in Art History.

Art History
Lower Division Courses
50. Ancient Art. (5) Lecture, three hours; quiz, one hour; museum field trips. History of modern art from 1860s to 1960s. From Manet's impressionism 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.

54. Modern Art. (5) Lecture, three hours; discussion, one hour; museum field trips. History of modern art from 1860s to 1960s. From Manet's impressionism 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.

55A. Introduction to Arts of Africa. (5) Lecture, three hours; discussion, one hour; museum field trips. Introduction to arts 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.

55B. Introduction to Pre-Columbian Art. (5) Lecture, three hours; discussion, one hour; museum field trips. Survey of sequence of cultures that developed in area between (and including) Mexico and Peru from circa 1000 B.C. to Conquest. P/NP or letter grading.

56A. Art of India and Southeast Asia. (5) 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.

56B. Chinese Art. (5) Lecture, three hours; discussion, one hour; museum field trips. General introduction to Chinese art, covering all major periods from Neolithic to modern age. Presentation of monuments as well as artifacts in variety of media in their social and historical contexts. P/NP or letter grading.

57. Renaissance and Baroque Art and Ideology. (5) Lecture, three hours; discussion, one hour. Survey of Renaissance and baroque art and ideology to introduce students to basic art-historical and iconographic analysis, Etruscan to modern age. Survey of Renaissance and baroque art and ideology to introduce students to basic art-historical and iconographic analysis, Neolithic to modern age. Presentation of monuments as well as artifacts in variety of media in their social and historical contexts. P/NP or letter grading.

58A-B. Lower Division Seminars. (1 each) Seminar, three hours. Limited to freshmen. Variable topics; consult Schedule of Classes or department for topics to be offered in specified term. P/NP or letter grading.

58A. Buddha's Life and Teachings in Art, Texts, and Worship. (5) Seminar, three hours. Limited to freshmen. Development of Buddhist art in India through Buddha's teaching as expressed in art, architecture, texts, and ritual. Re-creation of Buddha's life by analyzing art and reading Buddhist texts of his life. P/NP or letter grading.

Upper Division Courses
100. Art Historical Theories and Methodologies. (4) Seminar, three hours. Requisites: three courses from 50 through 57. Critical examination of history of discipline of art history, with studies of various theoretical, critical, and methodological approaches to visual arts. Letter grading.

M101A. Art and Architecture of Ancient Egypt, Predynastic Period to New Kingdom. (4) Same as Classics M151A. Lecture, three hours. Study of architecture, sculpture, painting, and minor arts during Predynastic period and Old Kingdom. May be repeated for credit with consent of instructor. P/NP or letter grading.

M101B. Art and Architecture of Ancient Egypt, New Kingdom to Greco-Roman Period. (4) Same as Classics M101B. Lecture, three hours. Study of architecture, sculpture, painting, and minor arts from New Kingdom to Greco-Roman period. P/NP or letter grading.

M101C. Ancient Egyptian Temple and City of Thebes. (4) Same as Classics M101C. Lecture, four hours; fieldwork, one hour. Focus on ancient temples of city of Thebes. 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 processions, chronological changes in function, and statuary program of individual temples. P/NP or letter grading.

M102A. Minoan Art and Archaeology. (4) Same as Classics M153A. Lecture, three hours. Requisites: course 50 or Classics 10 or 51A. Study of development of art and architecture in Minoan Crete from circa 3000 to 1000 B.C. P/NP or letter grading.

M102B. Mycenaean Art and Archaeology. (4) Same as Classics M153B. Lecture, three hours. Requisites: course 50 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.

M102C. Archaelgic Greek Art and Archaeology. (4) Same as Classics M153C. Lecture, three hours. Requisites: course 50 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.

M102D. Classical Greek Art and Archaeology. (4) Same as Classics M153D. Lecture, three hours. Requisites: course 50 or Classics 10 or 51A. 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.

M102F. Etruscan Art. (4) Same as Classics M153F. Lecture, three hours. Requisites: course 50 or Classics 20 or 51B. Arts of Italic peninsula from circa 1000 B.C. to end of Roman Republic. P/NP or letter grading.

M102G. Roman Art and Archaeology. (4) Same as Classics M153G. Lecture, three hours. Requisites: course 50 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.

M102H. Late Roman Art. (4) Same as Classics M153H. Lecture, three hours. Requisites: course 50 or Classics 20 or 51B. Art of Roman Empire from 2nd through 4th century (A.D.). P/NP or letter grading.

M102B-M102J. M102K. Classical Archaeology. (4-6) Same as Classics M153K. Lecture, three hours. Requisites: course 50 or Classics 10 or 51A. 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.


M103A-C103B. Museum Studies. (4-6) Concurrently scheduled with courses C203A-C203B. P/NP or letter grading. C103A. Lecture, three hours; discussion, one hour (when scheduled); demonstrations/field trips. Introduction to historical evolution of museums and museology, theories and methods of their operations, historical and critical relationships between museology, art history, and new technologies for archiving and exhibiting artifacts and historical materials. C103B. Lecture, three hours; demonstrations/field trips. Lectures and discussions organized to foster active critical engagement with museum policies, operations, and productions involving focused study and on-site research on particular museum institutions and exhibitions.

C103C. Museum Studies Practicum. (2 to 4) Lecture, three hours. Requisites: courses C103A, C103B. On-site examination and discussion of selected art works, exhibitions, and associated published and distributed materials, and of museum and gallery institutions, practices, and programs. Offered concurrently scheduled with course C203C. Letter grading.

C103D. Preservation of Art. (4) Lecture, three hours. Designed for Anthropology and Art History majors and other juniors/seniors. Introduction to preservation of cultural heritage materials. 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 environment contexts. 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 aspects with reference to changing values, illustrating how cultural materials may have been treated differently according to those values. Concurrently scheduled with course C212C. P/NP or letter grading.

104A. Western Islamic Art. (4) Lecture, three hours. From Tigris and Euphrates Rivers to Spain, 7th to 16th century. P/NP or letter grading.

104B. Eastern Islamic Art. (4) Lecture, three hours. From Tigris and Euphrates Rivers through Afghanistan and parts of central Asia; Ottoman Empire. P/NP or letter grading.

C104C. Problems in Islamic Art. (4) Seminar, three hours. Monuments or theoretical problems related to Islamic culture and artistic production. May be repeated for credit with consent of adviser. Concurrently scheduled with course C214. P/NP or letter grading.

105A. Early Christian Art. (4) Lecture, three hours. Required: course 57 and development of architecture, sculpture, and painting of early Christianity to iconoclastic controversy. P/NP or letter grading.


105E. Byzantine Art. (4) Lecture, three hours. Required: course 57 and development of Byzantine art from iconoclastic controversy to 1453 and diffusion of Byzantine art in Armenia, Georgia, Caucasus, and Russia. P/NP or letter grading.


106A. Italian Art of Trecento. (4) Lecture, three hours. Required: course 57. Art and architecture of Italy in 14th century. P/NP or letter grading.

106B. Italian Art of Quattrocento. (4) Lecture, three hours. Required: course 57; Art and architecture of 15th century. P/NP or letter grading.


106D. Late Renaissance Art: Counter-Reformation. (4) Lecture, three hours. Required: course 57. Painting, sculpture, and architecture of late 16th and early 17th centuries considered in context of Counter-Reformation. P/NP or letter grading.

108A-108B. Northern Renaissance Art. (4-4) Lecture, three hours. Required: course 57. Course 108A is required to 108B. Painting and sculpture in Northern Renaissance. P/NP or letter grading.

108C. From Bruegel to Rubens. (4) Lecture, three hours. Required: course 57. Art and history in Southern Netherlands (i.e., present-day Belgium), circa 1550 to 1650, in context of Spanish rule and revolt against it (1568 to 1585), true with northern independent (Dutch) Netherlands (1569 to 1621), and renewal of war (1621 to 1648). P/NP or letter grading.

C109A. Baroque Art. (4) Lecture, three hours. Art and architecture of Spain or Italy, 16th to late 17th century. Concurrently scheduled with course C209A. P/NP or letter grading.


109C. European Art of 18th Century. (4) Lecture, three hours. Required: course 57. Painting, architecture used to examine political and intellectual developments. Special emphasis on effects of rise of democratic institutions, especially French Revolution. P/NP or letter grading.


110B. European Art of 19th Century: Realism and Impressionism. (4) Lecture, three hours. Required: course 54. Inquiry into problem of realism, with emphasis on French art, but including developments in England and Germany. P/NP or letter grading.


M110D. Cultural and Intellectual History of Modern Europe, 19th Century. (Same as History M122E.) Lecture, three hours; discussion, 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.


110F. Selected Topics in Modern Art. (4) Lecture, three hours. Required: course 54. Changing topics in modern art (post-1780) that reflect interests of individual and regular visiting faculty members. May be repeated once for credit. P/NP or letter grading.


C110H. Latin American Art of 20th Century. (4) Lecture, three hours; discussion, one hour (when scheduled). Mainstream and postmodern responses and art and architecture of selected Latin American countries, including both modernist and postmodernist forms, considered in context of social and political concerns, both national and international. Concurrently scheduled with course C254. P/NP or letter grading.

C110I. Mexican Art in Modern Age. (4) Lecture, three hours. Mexican art of 19th and 20th centuries, from foundation of academy in 1788 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 C252. P/NP or letter grading.

111A. Early Art of India. (4) Lecture, three hours. Not open to freshmen. Survey of Indian art from 10th to 14th century. P/NP or letter grading.

111B. Cities in History. (4) Lecture, three hours; discussion, one hour. Examination of history of cities worldwide, locating cities in their aesthetic, social, cultural, and symbolic contexts. History of cities from origins of urbanism to present, with focus on recent centuries. P/NP or letter grading.

111C. American Houses. (4) 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 present-day U.S. over last 500 years, including both aesthetically ambitious houses and ordinary (or vernacular) ones, houses of immigrants and those of immigrants of many sorts, urban and rural houses, and single-family houses and multiple dwellings of all sorts. Ways for architecture to cater to diversity and to understand how they relate to major themes in history of American architecture. P/NP or letter grading.

111A. Early Art of India. (4) Lecture, three hours. Not open to freshmen. Survey of Indian art from 10th to 14th century. Decline of Buddhist art, last efflorescence of Hindu architecture, Muslim painting and architecture, and Rajput painting. P/NP or letter grading.

111D. Later Art of India. (4) Lecture, three hours. Not open to freshmen. Survey of Indian art from 15th to 19th century. Decline of Buddhist art, last efflorescence of Hindu architecture, Muslim painting and architecture, and Rajput painting. P/NP or letter grading.

111E. Arts of Korea. (4) Lecture, three hours. Art and archaeology of Korea from Neolithic Period through Yi dynasty. Particular emphasis on early archaeology and state formation, Buddhist art, Koryo ceramics, and Yi teet painting. P/NP or letter grading.

111F. Arts of Southeast Asia. (4) 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.

C115A. Advanced Indian Art. (4) Lecture, three hours. Requisite: course 114A. Study in Indian sculpture and architecture. Concurrently scheduled with course C257. P/NP or letter grading.

C115B. Selected Chinese Art. (4) Lecture, three hours. Study in Chinese painting and sculpture. Concurrently scheduled with course C258. P/NP or letter grading.


C115D. Art and Material Culture, Neolithic to 2100 B.C. (4) Lecture, three hours. Genesis of Chinese civilization in light of new archaeological finds, including sites and works of art (e.g., ceramics, bronzes, jade). Concurrently scheduled with course C261A. P/NP or letter grading.

C115E. Art and Material Culture of Early Imperial China, 210 B.C. to A.D. 906. (4) Lecture, three hours. Palaces and tombs of early imperial dynasties, impact of Buddhist art (cave temples), rise of new media and technology. P/NP or letter grading.

C115F. Art and Material Culture of Late Imperial China, 906 to 1911. (4) Lecture, three hours. Secular and religious (Taoist) architecture, painting, sculpture, and various luxury industries (lacquer, porcelain, textiles, jade, bronze, furniture, wood and bamboo carving, etc.). Concurrently scheduled with course C261C. P/NP or letter grading.

C115G. Art in Modern China. (4) 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 C261E. P/NP or letter grading.

C115J. Fieldwork in Archaeology. (8) Fieldwork, eight hours. Course takes place at Yangshzai Village in Jing River Valley, approximately 25 kilometers north of ancient city of Xi'an in northwestern China, as collaborative project between Cotsen Institute of Archaeology at UCLA, Shaanxi Institute of Archaeology, and Xibei University in Xi'an China. Students spend first week in Xi'an for five days of lectures and museum instruction. Following four weeks are spent in field participating in excavation and laboratory work at Shaanxi Institute of Archaeology's Jingwei Research Base. Concurrently scheduled with course C215J. P/NP or letter grading.

C117A. Pre-Columbian Art of Mexico. (4) Lecture, three hours. Requisite: course 55B. Study of art of selected cultures of northern Mesoamerica from circa 1200 B.C. to Conquest, with emphasis on historical and iconographic problems. Concurrently scheduled with course C218A. P/NP or letter grading.

C117B. Pre-Columbian Art of Maya. (4) Lecture, three hours. Requisite: course 55B. 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 C218B. P/NP or letter grading.

C117C. Pre-Columbian Art of Andes. (4) Lecture, three hours; discussion, one hour. Requisite: course 55B. Study of art of selected cultures of Colombia, Ecuador, Peru, and Bolivia from circa 4000 B.C. to Conquest, with particular emphasis on history and iconography of formative periods. Concurrently scheduled with course C218C. P/NP or letter grading.

C117D. Aztec Art. (4) Lecture, three hours. Requisite: course 55B or C117A. Painting, sculpture, architecture, and other arts of Nahua-speaking peoples of central Mexico from Tenochtitlan to downfall and conquest, with emphasis on their social and historical context and major scholarly debates. Concurrently scheduled with course C218D. P/NP or letter grading.

C117E. Colonial Art of Latin America. (4) Lecture, three hours. Hybrid visual cultures created in aftermath of this cultural collision in Mexico, former Viceroyalty of New Spain, from 18th to 18th century. Topics include theories of conquest and colonization; role and architecture in conquest, conversion, and colonization; indigenous artistic responses and creation of hybrid visual practices in featherwork, manuscripts, painting, sculpture, and architecture; maps and geography of colonization; urban planning and utopian ideals; Counter-Reformation and politics of representation; saints' cults and gender ideologies; Aztec and Hispanic Catholic blood sacrifice imagery; processional sculpture and fiestas; cult of Virgin of Guadalupe; and arts and rise of creole nationalism. Analysis of variety of readings, including indigenous accounts of conquest and Inquisition guidelines for religious imagery. Letter grading.

C118A. Arts of Oceania. (4) Lecture, three hours. Requisite: course 55A. Survey of arts of major island groups of Oceania, style-regions and broad historical relationships. P/NP or letter grading.

C118B. Caribbean Art. (4) Lecture, four hours. Cultural history of Caribbean. People of diverse backgrounds — African, East Indian, Spanish, English, French, Carib, Chinese, and Middle Eastern — came together under very different circumstances, each bringing its own traditions. In 20th century traditions evolved and changed, creating new forms that are cognizant and honor those of the historic groups. Together they have produced multicultural, eclectic, vibrant, and globally influential expressions. Study of vibrant culture of Caribbean through specific festivals, religious arts, and studio arts and contribution of individual artists in communal expression. P/NP or letter grading.

C118C. Arts of Sub-Saharan Africa. (4) Lecture, three hours. Critical examination of key themes in art and architecture of Africa, with emphasis on visual arts and built environment function with respect to larger cultural and social issues. P/NP or letter grading.

C118D. Arts of Native North America. (4) Lecture, three hours. Survey of painting, sculpture, and other arts from Native cultures of Caribbean and southwestern U.S. P/NP or letter grading.

C118E. Advanced Studies in Non-Western Art. (4) Lecture, three hours. Requisite: course 118A or 118C or 118D. Selected topics in arts of non-Western peoples that reflect interests of individual regular and/or visiting faculty members. May be repeated twice for credit. P/NP or letter grading.

C119C. Contemporary Arts of Africa. (4) Lecture, three hours. 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 curators, and very definitions of “contemporary African art.” Concurrently scheduled with course C216C. P/NP or letter grading.

C119D. Architecture and Urbanism in Africa. (4) 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 C216D. P/NP or letter grading.

C119E. African Civilizations. (4) Lecture, three hours. Development of three very different African civilizations through their arts from 100 B.C.E. to present. P/NP or letter grading.

127. Undergraduate Seminar. (4) Seminar, three hours. Designed for juniors/seniors. Selected aspects of contemporary art, with topics to be announced. Meetings, discussion, research papers, and oral presentations. May be repeated twice. P/NP or letter grading.

C140A. History of Korean Painting. (4) Lecture, three hours. Requisite: course 114E. Korean painting history from Three Kingdom period to 18th century, with special emphasis on Choson dynasty (1392 to 1910). Concurrently scheduled with course C242A. P/NP or letter grading.

C140B. History of Korean Ceramics. (4) Lecture, three hours. Requisite: course 114E. History of Korean ceramics from Neolithic period to 19th century, with special emphasis on technological and stylistic developments. Concurrently scheduled with course C242B. P/NP or letter grading.

C140C. History of Korean Buddhist Art. (4) Lecture, three hours. Requisite: course 114E. History of Korean Buddhist art from Three Kingdom period to Choson dynasty, with special emphasis on Buddhist sculpture, painting, and architecture. Concurrently scheduled with course C242C. P/NP or letter grading.

C140D. Selected Topics in Korean Art. (4) Lecture, three hours. Requisite: course 114E. Variable topics in Korean art that reflect interests of individual regular and/or visiting faculty members. Concurrently scheduled with course C242D. P/NP or letter grading.

C147. Modern Art, 1900 to 1950. (4) Lecture, three hours. Inquiry into 20th-century art, from Fauvism to abstraction expressionism. Topics include primitivism, gender, and sexuality in modernist art; origins of abstraction, collage, photomontage, and ready-made; rise of automatism and chance procedures; art, utopia, and political revolution; antimodernism and fascism; mass culture, machine paradigm, and work of art in age of mechanical reproduction. Concurrently scheduled with course C247. P/NP or letter grading.

C149A. Dada, 1915 to 1923. (4) Lecture, three hours; discussion, one hour (when scheduled). Introduction to modernism and historical avant-garde of early 20th century, tracing in detail emergence of Dada avant-garde in its various geographical locales during and after World War I. Visual art, literature, film, and performance addressed, with special attention to invention of Surrealism as well as to challenge to art history posed by surrealism's engagement with lessons of psychoanalysis. Concurrently scheduled with course C249B. P/NP or letter grading.

C149B. Surrealism, 1924 to 1939. (4) 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 strand of French surrealism and political movements that culminates in works of Dada, Surrealism, and other avant-garde movements. P/NP or letter grading.

C150A. Contemporary Art, 1940s to 1950s. (4) Lecture, three hours. Requisite: course 54. 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 C252A. P/NP or letter grading.


150D. Selected Topics in Contemporary Art. (4) Lecture, three hours. Requisite: course 54. 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.
Graduate Courses

200. Art Historical Theories and Methodologies. (4) Seminar, three hours. Critical examination of history of discipline of art history, with studies of various theoretical and methodological approaches to visual arts from antiquity to present. May be repeated for credit with consent of advisor. S/U or letter grading.

201. Topics in Historiography of Art History. (4) Seminar, three hours. Critical examination of historiographic traditions of specific areas and fields within discipline of art history, with consultation with particular time periods, geographical areas, artistic traditions, or work of one or more authors. May be repeated for credit with consent of advisor. S/U or letter grading.

202. Topics in Theory and Criticism in Art History. (4) Seminar, three hours. For study of various theoretical and critical traditions within art history, concentrating on particular issues, authors, or methodologies either within or across historical and cultural art historical traditions. P/NP or letter grading.

C203A-C203B. Museum Studies Practicum. (4-4) Concurrently scheduled with courses C103A-C103B. S/U or letter grading. Museum studies internships in supervised settings at participating museums in the San Francisco Bay Area. May be repeated for credit with consent of advisor. S/U or letter grading.

C204A. Cultural Materials Science I: In-Situ Non-invasive Diagnostic Investigations and Documenta- tion. (4) Same as Conservation M215. Seminar, two hours; laboratory, three hours. Cultural heritage science is about understanding chemistry and technology of material heritage, concentrating on non-invasive investigation and exploration of means to preserve these materials through application of technologies and knowledge from physical sciences and engineering. Introduction to various techniques of scientific analysis and documentation of cultural materials for development of risk assessments by examining non-invasively their surface, subsurface, and interior. Topics include digital photography, diagnostic and forensic imaging (at wide spectral range), and portable spectroscopic methods for noninvasive material analysis at molecular and elemental level. Knowledge and practical skills to apply basic portable noninvasive techniques and instrumentation in field and laboratory and to appreciate potential contribution of more advanced imaging and spectroscopic tools. Letter grading.

C205. Studies in Prints. (4) Seminar, two hours. Critical studies in history and connoisseurship of graphic arts in Western world. Group or individual studies often culminate in professionally directed exhibitions produced by Grunwald Center for Graphic Arts. May be repeated for credit with consent of advisor. S/U or letter grading.

C206. Studies in Drawings. (4) Seminar, two hours. Critical studies in history and connoisseurship of draughtsmanship in Western world. Individual studies emphasizing professional presentation. Group studies may culminate in exhibitions sponsored by Grunwald Center for Graphic Arts. May be repeated for credit with consent of advisor. S/U or letter grading.


C208. Literature of African Art. (4) Seminar, three hours. Limited to graduate students. Designed to prepare both graduate African Art minors and specialists to understand certain para-narrative texts of African art history with critical fluency. S/U or letter grading.

C209A. Baroque Art. (4) Lecture, three hours. Art and architecture of Spain or Italy, 16th to late 17th century. Concurrently scheduled with course C103A. S/U or letter grading.

C210. Egyptian Art. (4) Seminar, two hours. Requi- sites: courses M101A, M101B, M102A. Art in Egypt during Late period and Greco-Roman period. Students should be ready to prepare for every meeting briefing of topic from archaeological memoirs, not to exceed 10 minutes. Some lectures. May be repeated for credit with consent of advisor. S/U or letter grading.

C211. Topics in Aegean Art. (4) Seminar, two hours. Requisites: courses M102A, M102B. Art and architecture of Aegean Bronze Age (3000 to 1000 B.C.). Monuments or theoretical problems related to art and culture of Crete, Greece, Cyclades, or Western Anatolia. May be repeated for credit with consent of advisor. S/U or letter grading.

C212A. American Art before Civil War. (4) Lecture, three hours. Painting, sculpture, and architecture in U.S. from Colonial period through Civil War. May be repeated for credit with consent of advisor. Concurrently scheduled with course C112A. S/U or letter grading.

C212B. American Art in Gilded Age, 1860 to 1900. (4) Lecture, three hours. Painting, sculpture, and archi- tecture in U.S. from Civil War to turn of century. May be repeated for credit with consent of advisor. Concurrently scheduled with course C112B. S/U or letter grading.

C171A-C171B-C171C. History of Photography. (4- 4-4) Concurrently scheduled with courses C271A- C271B-C271C. Three connected Lectures. Three hours. Study of development of photography in 19th and early 20th centuries, from Niepce to Atget. C171B. 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. C171C. 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.
218C. Pre-Columbian Art of Andes. (4) Lecture, three hours; discussion, one hour. Requisite: course 55B. Study of art of selected cultures of Colombia, Ecuador, Peru, and northern Argentina to Conquest, with particular emphasis on history and iconography. May be repeated for credit with consent of adviser. Concurrently scheduled with course C117B. S/U or letter grading.

218E. Colonial Latin American Art. (4) Lecture, three hours. Hybrid visual cultures created in aftermath of this cultural collision in Mexico, former Viceroyalty of New Spain, from 16th to 18th century. Topics include theories of conquest and colonization; role of art and architecture in conquest, conversion, and colonization; indigenous artistic responses and creation of hybrid visual cultures; art in monasteries, manuscripts, paintings, sculpture, and architecture; maps and geography of colonization; urban planning and utopian ideals; Counter-Reformation and politics of representation; saints and devotional art; Aztec and Hispanic Catholic iconography; with emphasis on their social and historical context and major scholarly debates. May be repeated for credit with consent of adviser. Concurrently scheduled with course C170D. S/U or letter grading.

219A. Oceanic Art. (4) 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.

219B. Pre-Columbian Art. (4) Seminar, three hours. Studies in selected topics in art of pre-Hispanic Latin America. May be repeated for credit with consent of adviser. S/U or letter grading.

219C. African Art. (4) 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.


221. Topical in Classical Art. (4) Seminar, two to three hours. Studies in Parthian art. Site-by-site survey of Parthian ceramics from Neolithic period to 19th century, with special emphasis on technological and stylistic developments. Concurrently scheduled with course C140A. S/U or letter grading.

222. Classical Art. (4) Seminar, two hours. Studies in Greco-Roman art and archaeology. Studies of specific periods, sites, or artistic media. May be repeated for credit with consent of adviser. S/U or letter grading.

223. Medieval Art. (4) Seminar, two hours. Studies in selected topics by Byzantine and European medieval art. May be repeated for credit with consent of adviser. S/U or letter grading.

226A-226B. Medieval Art and Architecture. (4-4) Seminar, two hours. Studies in selected topics by Byzantine and European medieval art. May be repeated for credit with consent of adviser. S/U or letter grading.

227. Renaissance and Baroque Paleography. (4) Seminar, two hours. Preparation: knowledge of Italian; working knowledge of Latin. Workshop approach to documents pertaining to artistic commissions from 15th to 17th century in Italy to study various aspects of handwriting in official and private deeds, correspondence, wills, and inventories. May be repeated for credit with consent of adviser. S/U or letter grading.

230. Italian Renaissance Art. (4) Seminar, two hours. Preparation: knowledge of Italian. Study of various aspects of Leonardos theoretical approach to art in terms of sources and impact on followers. May be repeated for credit with consent of adviser. S/U or letter grading.


235. Northern Renaissance Art. (4) 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.

240. Baroque Art. (4) Seminar, two hours. Emphasis on selected topic (e.g., particular artist, trend, or problem). Preparation: knowledge of German. Research papers and oral reports required. Language requirements depend on area of focus. May be repeated for credit with consent of adviser S/U or letter grading.


242A. History of Korean Art. (4) Seminar, three hours. Preparation: course 114E. Korean painting history from Three Kingdom period to 19th century, with special emphasis on Choson dynasty (1392 to 1910). Concurrently scheduled with course C140A. S/U or letter grading.

242B. History of Korean Ceramics. (4) Lecture, three hours. Preparation: course 114E. History of Korean ceramics from Neolithic period to 19th century, with special emphasis on Buddhist sculpture, painting, and architecture. Concurrently scheduled with course C140B. S/U or letter grading.

242C. History of Korean Buddhist Art. (4) Lecture, three hours. Preparation: course 114E. History of Korean Buddhist art from Three Kingdom period to Choson dynasty, with special emphasis on Buddhist sculpture, painting, and architecture. Concurrently scheduled with course C140A. S/U or letter grading.

242D. Selected Topics in Korean Art. (4) Lecture, three hours. Preparation: course 114E. Variable topics in Korean art that reflect interests of individual regular and/or visiting faculty members. Concurrently scheduled with course C140B. S/U or letter grading.

243. Selected Topics in Korean Art. (4) 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.

244. Topics in European Art, 1700 to 1900. (4) Seminar, two to three hours. Preparation: knowledge of French, Italian, or German. May be repeated for credit with consent of adviser. S/U or letter grading.

245. European Art, 1700 to 1900. (4) Seminar, two hours. Preparation: knowledge of French, Italian, or German. May be repeated for credit with consent of adviser. S/U or letter grading.

247. Modern Art, 1900 to 1950. (4) 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; origins of abstraction, montage, and ready-made; influence of automatism on chance procedures; art, utopia, and political revolution; antimodernism and fascism; mass culture, machine production, and work of art in age of mechanical reproduction. Concurrently scheduled with course C147. S/U or letter grading.

249A. Dada, 1915 to 1923. (4) Lecture, three hours; discussion, one hour (when scheduled). Preparation: knowledge of modernism and historical avant-garde of early 20th
century, tracing in detail emergence of Dada avant-garde in its various geographical locales during and after World War II, film and performance art, and conceptual art. Offered in English and French, history of avant-garde art will be addressed, with special attention to invention of series of avant-garde strategies crucial to Dada: ready-made, chance procedures, mechanical drawing, and photography. Concurrently scheduled with course C149A. S/U or letter grading.

C249B. Surrealism, 1924 to 1939. (4) Lecture, three hours; discussion, one hour (when scheduled). Study of art, literature, and film associated with surrealist movement in France, with special attention to dissolution of surrealism of writer and philosopher Georges Bataille, as well as to challenge to art history posed by surrealism’s engagement with theories of psychoanalysis. Concurrently scheduled with course C149B. S/U or letter grading.

C250A. Contemporary Art, 1940s to 1950s. (4) Lecture, three hours. Requisite: course 54. Study of major artistic and cultural trends following World War II in the U.S. and Europe, covering abstract expressionism to pop art. Concurrently scheduled with course C150A. S/U or letter grading.


251. Contemporary Art. (4) Seminar, three hours. Selected topics in contemporary art, criticism, and theory. S/U or letter grading.

252. Mexican Art in Modern Age. (4) Lecture, three hours. Mexican art of 19th and 20th centuries, from foundation of academy in 1785 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 C110I. S/U or letter grading.

253. Modern Art. (4) Seminar, two hours. Changing topics in modern art (including illustration and other popular forms) that reflect interests of particular faculty members. Social and economic factors affecting arts of France and Germany at various times. May be repeated for credit with consent of adviser. S/U or letter grading.

254. Latin American Art of 20th Century. (4) Lecture, three hours. Mexican art of 19th and 20th centuries, from foundation of academy in 1785 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 C110I. S/U or letter grading.

255. American Art. (4) Seminar, two hours. Requisite: course C112A or C112B or C112C, depending on topic. Topics in American art from colonial period to present. Discussion of weekly readings, student oral presentations, and papers. May be repeated for credit with consent of adviser. S/U or letter grading.

256. Topics in African American Art. (4) (Same as Afro-American Studies M256.) Seminar, three hours. Requisite: course CM112D or CM112E or CM112F. 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.

257. Advanced Indian Art. (4) Lecture, three hours. Requisite: course C111A. Study in Indian sculpture/architecture. May be repeated for credit with consent of adviser. Concurrently scheduled with course C115A. S/U or letter grading.

C258. Advanced Chinese Art. (4) Lecture, three hours. Study in Chinese painting and sculpture. May be repeated for credit with consent of adviser. Concurrently scheduled with course C115B. S/U or letter grading.


260A. Indian Art. (4) Lecture, two hours. Advanced study in secular and religious artistic traditions of India. May be repeated for credit with consent of adviser. S/U or letter grading.

260B. Chinese Art. (4) Lecture, two 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.


C261A. Art and Material Culture, Neolithic to 210 B.C. (4) Lecture, three hours. Genesis of Chinese civilization in light of new archaeological finds, including sites and works of art, temples, bronzes, jade. May be repeated for credit with consent of adviser. Concurrently scheduled with course C115D. Extensive research paper required of graduate students. S/U or letter grading.

C261B. Art and Material Culture of Early Imperial China, 210 B.C. to A.D. 906. (4) Lecture, three hours. Palaces and tombs of early imperial dynasties, impact of Buddhist art (cave temples), rise of new media and technologies. May be repeated for credit with consent of adviser. Concurrently scheduled with course C115E. S/U or letter grading.

C261C. Art and Material Culture of Late Imperial China, 906 to 1911. (4) Lecture, three hours. Secular and religious (Buddhist and Taoist) architecture, painting, sculpture, and various luxury industries (lacquer, porcelian, textiles, jade, bronze, furniture, wood and bamboo carving, etc.). May be repeated for credit with consent of adviser. Concurrently scheduled with course C115F. S/U or letter grading.

C261D. Art in Modern China. (4) Lecture, three hours. Conceived 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-identy, assimilation, modernity, tradition, and continuity. Consider development of Chinese art in global context. Concurrently scheduled with course C115G. S/U or letter grading.

C261E. Selected Topics in Chinese Art. (4) Lecture, three hours. Variable topics in Chinese art that reflect interests of individual regular and/or visiting faculty members. Concurrently scheduled with course C115I. S/U or letter grading.

M262A. Topics in Asian Archaeology. (4) (Same as Anthropology M216.) Lecture, 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.” Letter grading.

M265. Fieldwork in Archaeology. (2 to 8) 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.

M270. Art Law. (4) (Same as Law M301.) Lecture, three hours. Knowledge of major art laws, art management, or international law desirable. Limited enrollment; management and art history students may cross-register with consent of instructors. Legal issues related to fine arts. Consideration of U.S. domestic law as well as international treaties and foreign law in addressing such controversial issues as international trade in art, art in public places, and moral rights. Distinguished guest speakers and one field trip. S/U or letter grading.

C271A-C271B-C271C. History of Photography. (4-4-4) Lecture, three hours; discussion, one hour. Concurrently scheduled with courses C171A-C171B-C171C. S/U or letter grading. C271A. 1839 to 1910. Study of origin, social functions, and development of photography in 19th and early 20th centuries, from Niépce to Atget. C271B. 1910 to Present. 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. C271C. Selected Topics. Variable topics in history of photography that reflect interests of individual regular and/or visiting faculty members.


C280A. Art and Empire. (4) 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 C180A. Letter grading.


C280C. Modern and Contemporary South Asian Art. (4) Lecture, three hours. Topics in modern and contemporary South Asian art from 1900 to present. Concurrently scheduled with course C180C. 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 Art History. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate, or fellow. Designed for graduate students. Required of all new teaching assistants during Fall Quarter of their teaching assistant appointment. Workshop/seminar in teaching techniques and pedagogical issues, consisting of readings, discussions, and guest speakers on selected topics. May not be applied toward M.A. or Ph.D. course requirements. 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. 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 M.A. Comprehensive Examination or Ph.D. Qualifying Examinations. (2 to 12) Tutorial, to be arranged. S/U grading.


ARTS AND ARCHITECTURE
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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; laboratory; three hours; outside study, eight hours. Through series of directed 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 Courses
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, discussion, research papers, and oral presentations. Topics announced in advance. May be repeated for credit for maximum of 8 units. P/NP or letter grading.

101. Aesthetics of Multimedia. (4) Lecture, three hours; laboratory, one hour; outside study, eight hours. Arts stand at expressive center of new forms of digital expression described as “multimedia.” Historical roots of this new expression traced over 1,500 years of world culture preparation for collaborative multimedia student projects. Letter grading.

102. Introduction to Arts Education: Theory and Practice. (4) Formerly numbered 102SL.) Seminar, three hours; site and peer school visits, three hours; outside study, six hours. Introductory course with focus on arts education 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.

192. Arts Education Undergraduate Practicum: Preparation, Observation, and Practice. (4) Seminar, three hours; practicum, three hours; outside study, six hours. Enforced requisites: courses 102, 192. 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.

192SL. Arts Education Undergraduate Practicum and Capstone Project. (4) Seminar, three hours; practicum, three hours; outside study, six hours. Enforced requisites: courses 102, 192. 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 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.

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Professors
Mitchell J. Chang, Ph.D.
King-Kok Cheung, Ph.D.
C. Cindy Fan, Ph.D.
Lance Ryo Hirabayashi, Ph.D. (George T. and Sakaye I. Aratani Professor of Japanese American Internment, Redress, and Community)
Marjorie Kagawa-Singer, R.N., Ph.D.
Jerry Kang, J.D. (Korea Times-Hankook Ilbo Professor of Korean American Studies)
Valerie J. Matsumoto, Ph.D.
Paul M. Ong, Ph.D.
Shu-meii Shih, Ph.D.
Loie M. Takahashi, Ph.D.
Min Zhou, Ph.D. (Walter and Shirley Wang Professor of U.S./China Relations and Communications)

Professors Emeriti
Snehendu B. Kar, Dr.P.H., M.Sc.
Don T. Nakaniashi, Ph.D.

Associate Professors
Victor Bascara, Ph.D.
Clara Chu, Ph.D.
Gilbert C. Gee, Ph.D.
Grace Kyungwon Hong, Ph.D.
Vinay Lai, Ph.D.
Anna S. Lau, Ph.D.
Jing Ling, Ph.D.
David Wong Louie, M.F.A.
Purnima Maniakkar, Ph.D.
Aileen Moon, Ph.D.
Vinit Mukhija, Ph.D.
Thu-huong Nguyen-vu, Ph.D.
Kyeoung Park, Ph.D.

Assistant Professors
Lucy San Pablo Burns, Ph.D.
Keith Lujan Camacho, Ph.D.

Lecturers
Stewart Kowhi, J.D.
Glenn K. Omatu, M.A.
Duong Pham, Ph.D.

Adjunct Assistant Professor
Tritia Toyota, Ph.D.

Scope and Objectives
The Asian American Studies Department promotes the study of Asian Americans and Pacific Islanders in the U.S. from several disciplines. An undergraduate major leading to a B.A. degree is available for those students who wish to pursue their studies about Asian Pacific Americans in more depth, while the graduate program leads to the M.A. degree. Students enrolled in an organized undergraduate major other than Asian American Studies may pursue a minor in the field.

A major goal of the department is to communicate the experiences of Asian Pacific Americans as an ethnic group. Courses examine the important issues and concerns of Asian Pacific Americans, including their history, community, and culture.

Asian American studies is a specialized field of intellectual inquiry in higher education that examines the diverse experiences of Asian ancestry and Pacific Islander Americans, including their histories, communities, cultures, socio-economic mobility, and political participations, and their relationships with ancestral homelands and other Asian diasporas.

Interdisciplinary scholarship has from the outset been the cornerstone of the field, but Asian American studies also seeks to interrogate disciplinary boundaries by adopting comparative and cross-disciplinary or multidisciplinary perspectives to study racial and ethnic relations in America, diasporic and transnational communities, U.S.-Asian relations, and globalization.

The department recognizes its vital historical and continuing linkage with the struggle for the civil rights and social justice of people of color and other disadvantaged social groups. Faculty members are committed to offering a curriculum that embraces the historical and contemporary realities of Asian Americans and Pacific Islanders, supporting research that promotes equality, encouraging community services, and making higher education more inclusive and responsive to American diversity.

The department equips students with theoretical, methodological, and practical knowledge, as well as analytical and communication skills needed to be successful in American society while creating a nurturing environment for facility, students, and staff in their interdepartmental and extramural collaborations and activities. It aims to build on UCLA’s preeminence and to strengthen its position as the national leader in Asian American studies.

The department also is enhanced by its connection to and interaction with the Asian American Studies Center. Established in 1989, the center has been widely recognized as one of the world’s top Asian American studies institutions.

The undergraduate and graduate programs aim to enhance and infuse the UCLA curriculum with an interdisciplinary understanding of the Asian American experience to promote innovative research and cutting-edge scholarship in Asian American studies, provide leadership training to individuals interested in working in Asian American communities, and prepare students for advanced study in the humanities, social sciences, and professional disciplines.
Undergraduate Study
Asian American Studies B.A.
The B.A. 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 Pacific Americans. An overall grade-point average of 2.0 or better is required for admission to the major.

Preparation for the Major
Required: Asian American Studies 10 or 10W, and 20.

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: two lower division Asian American studies courses or two courses that focus on Asian Americans, and one year of proficiency in an Asian language.

Refer to the UCLA Transfer Admission Guide at http://www.admissions.ucla.edu/prospect/adm_tr.htm for up-to-date information regarding transfer selection for admission.

The Major
Required: A total of 13 upper division courses, including one research methods course, two Asian American theme courses, two Asian American or Pacific Islander populations and communities courses, and five Asian American studies elective courses. In addition, three upper division courses (12 to 15 units) must be taken from disciplines outside Asian American studies, including (1) one race, ethnicity, or interethnic relations course, (2) one gender and/or sexuality course, and (3) one non-language course on the history, culture, political, and/or social institutions of Asia. The three additional courses must be selected from the approved list of courses available in the Student Advising Office each term or at http://www.asianam.ucla.edu.

Students must also (1) demonstrate proficiency equivalent to the completion of an elementary one-year course of study in an Asian language prior to graduation or (2) take one of the following writing courses: Asian American Studies 101, English Composition 100W, 129A through 129D, 131A through 131D, 132A through 132D.

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. 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), and each must be at least 4 units.

Honors Program 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 and one upper division research methods course selected from a list maintained in the Student Advising Office. Applications must be submitted no later than the end of the fifth week of classes during Winter Quarter of each academic year. For application forms and further information, contact the undergraduate counselors.

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 counselors, Asian American Studies Center, 3230 Campbell Hall.

Required Lower Division Courses (10 units): Asian American Studies 10 or 10W, and 20.

Required Upper Division Courses (20 units): One Asian American theme course, one Asian American or Pacific Islander populations and communities course, and three Asian American studies elective courses.

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. Only courses in the department or those multiple-listed with the department may be taken to fulfill requirements for the minor.

Each minor 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. 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, http://www.gdnet.ucla.edu/gasaalibrary/pgmrqintro.htm. 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 (M.A.) degree in Asian American Studies. Two concurrent degree programs (Asian American Studies M.A./Public Health M.P.H. and Asian American Studies M.A./Social Welfare M.S.W.) 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 10. Multidisciplinary examination of history of Asians and Pacific Islanders in U.S. Satisfies Writing II requirement. 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.

30. Asian American Literature and Culture. (5) Lecture, three hours; discussion, one hour. Not open for credit to students with credit for course 30W. Multidisciplinary examination of 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.

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 30. 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.

40. Serve People: Asian American Community-Based Learning. (5) Lecture, three hours; discussion, one hour. Multidisciplinary examination of Asian American social movements and their connections to issues such as migration, race, and community formation within framework of community-based service learning. P/NP or letter grading.

50. 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. Academic Writing in Asian American Studies. (4) Lecture, three hours. Lecture during Winter Quarter 10 or 10W, and 20. Designed for advanced junior/senior Asian American Studies majors and minors. Advanced study of academic writing in specific Asian American studies subfields, with focus on development and analysis of proposals, reports, and academic journal articles (including literary essays and/or social sciences research papers) in common discursive forms, stylistic patterns, and research paradigms. Themes and focus vary by term. Independent research
related to course objective may be pursued with guidance from instructor. Sharing and critiquing of other students' work and improvement of P/NP or letter grading.

103. Social Science Research Methods. (4) Lecture, three hours; discussion, one hour. Designed for juniors/seniors. Introduction to fundamentals of conducting social research on Asian Americans, providing experience in using research methods and exercises in evaluating nature and quality of scientific research on Asian American issues. P/NP or letter grading.

104A. Field Studies Methods in Asian Pacific Communities. (4) Lecture, three hours. Preparation: one course from 101 through M191F. Development of community profiles on Asian American communities of study by field survey, techniques of data collection. P/NP or letter grading.

104B. Internships in Asian Pacific Communities. (4) Fieldwork, eight hours minimum. Require: course 104A or another Asian American studies course (except 199). Integrates academic and empirical work by providing students challenge of performing public service and community work in Asian Pacific or multicultural communities, and of bringing their ongoing internship experiences back to classroom. P/NP grading.

105. Historical Research Methods. (4) Seminar, three hours. Require: course 10. Introduction to methods and analyzing source materials for research on Asian American history. Historians have used wide range of sources that may include archival materials, oral history, material culture, and more. P/NP or letter grading.

M108. Policy, Planning, and Community. (4) Same as Urban Planning M122.) Lecture, three hours; field laboratory. Project-oriented methods course on conducting needs assessment in Asian American communities. Geographic information systems to be used to defined problems and needs. Letter grading.

111. Asian Americans and War. (4) Lecture, three hours. Interdisciplinary examination of role that war has played in history and culture of Asian Americans, drawing on diverse sets of materials ranging from Asian American literature, Hollywood movies, and wartime propaganda to political speeches, Supreme Court decisions, and protest culture, to evaluate relationship between Asian American communities and geopolitical conflicts from late-19th century to contemporary period. P/NP or letter grading.

M112B. Contemporary Asian American Literary Issues and Criticism. (5) Same as English M102A.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Survey of Asian American literature. Various authors either produce, or thematically reflecting pre-1980 period. Issues include immigration, diaspora, generational conflict, appropriation of cultural traditions, ethnic/gender formation, inter-ethnic dynamics, and social movement. Works by such authors as Edith Eaton, Younghill Kang, Carlos Bulosan, Hisaye Yamamoto, John Okada, Frank Chin, and Maxine Hong Kingston. P/NP or letter grading.

M112B. Contemporary Asian American Literary Issues and Criticism. (5) Same as English M102B.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Survey of post-1980 Asian American literature that explores key literary and critical issues, such as race and geography, aesthetics and activism, cultural work and immigrant labor, kinship and sexualities, model minority and Orientalism, and meat versus rice, in study of novels, poetry, performance, memoirs, and essays. May be repeated for credit with topic or instructor permission. P/NP or letter grading.

112C. Asian American Creative Writing. (4) Seminar, four hours. Enforced requisite: English Composition 3 or 3H. Designed for juniors/seniors. Examination of margin of geographic and psychic spaces that Asian American mainstream and specific factors, such as generation, ethnicity, gender, class, and sexual orientation, that shape individual's unique margin. Balanced blend of reading and creative writing. P/NP or letter grading.

113. Asian Americans and Law. (4) Lecture, four hours. Survey of major federal and California case and legislative law directed toward Asian Americans from 1850 to World War II and incarceration. Major subject areas include anti-Asian labor legislation, legal prohibitions against Asian's right to testify, Executive Order 9066, educational opportunity for Asians. P/NP 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. (4) Lecture, three hours. Condition of Asian women's study, choices for women in Asian American history, racial and cultural stereotypes, and contemporary issues. Methodological approaches to study of gender issues presented and evaluated. P/NP or letter grading.

M116. 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 participants linked to liberation literature, personal transformation and growth. P/NP or letter grading.


M119. Asian American and Pacific Islander Labor Issues. (4) Formerly numbered 119.) Same as Labor and Workplace 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.

120. Asian American History through Lenses. (4) Lecture, four hours. Requires: English Composition 3 or 3H. Same as English M153 and Comparative Literature M171.) Lecture, three hours; discussion, one hour. Students read a variety of Asian American literature, film, and visual art as source material. The works studied are approached thematically and as they affect status of Korean Americans and their community. P/NP or letter grading.


122A. Indigeneity, Empire, and Resistance in Pacific Islands. (4) Lecture, three hours. Introduction to indigenous and postcolonial histories of Pacific Islands. Discursions, film screenings, guest speakers, and reading assignments, with focus on issues of cultural survival, empire, indigeneity, migration, resistance, sovereignty, and war. P/NP or letter grading.

122B. Gender and Film in Pacific. (4) Lecture, three hours. Require: course 122A. Exploration of theories of film in Pacific Islands during 20th century, with attention to postcolonialism. Not open to students with credit for course 122A. To engage students in textual and visual readings of feature-length films about Pacific. Discursions, film screenings, and guest speakers, with focus on aesthetic, cultural, social, historical, and political dimensions of films. P/NP 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 contemporary scholarship on U.S. empire. Examination of political and intellectual coalitions toward which Asian American studies critique builds. Empasizes work that approaches study of empire through comparative racial formations, postcolonialism, transnationalism, and studies of migration. P/NP or letter grading.

M129. Health Issues for Asian Americans and Pacific Islanders: Myth or Model? (4) Same as Community Health Sciences M140.) Lecture, three hours; fieldwork, one hour. Includes 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/NP or letter grading.


M130B. Chinese Immigrant Literature and Film. (4) Same as Chinese M133 and Comparative Literature M171.) Lecture, three hours; discussion, one hour. Knowledge of Chinese not required. In-depth look at Chinese immigrant experiences by reading a range of literature and watching films. Theories of diaspora, gender, and race to inform thinking and discussion of relevant issues. P/NP or letter grading.

M130C. Chinese Immigration. (4) Same as Sociology M136.) Lecture, three hours. Focus on Chinese migration to the U.S. Survey of sociological studies of Chinese immigration, with focus on international context, organization, and institutions of Chinese America and its interactions with social environment. P/NP or letter grading.


131B. Japanese Americans and Incarceration. (4) Seminar, three to four hours. Require: course 10 or 10W. Designed for juniors/seniors. In-depth analysis of key literature about mass incarceration of Japanese Americans during 1940s. Immediate and long-range effects of internment. Original paper based on primary sources held by University of California required. Letter grading.

131C. Japanese American Resettlement. (4) Seminar, three to four hours. Require: course 131A. In-depth analysis of key literature about resettlement of Japanese Americans during World War II. Development of original research paper based on primary sources. P/NP or letter grading.


M132B. Korean American Literature. (4) Same as Chinese M133 and Comparative Literature M171.) Lecture, three hours; discussion, one hour. Comprehensive introduction to Korean American literature, with emphasis on Korean American experience, problems of gender, race, and class, nationalism, gender, race, and culture. P/NP or letter grading.


of Vietnamese Americans. Examination of historical and contemporary sociocultural, economic, and political issues as they affect status of Vietnamese Americans and their community. P/NP or letter grading.

141A. Asian American and Pacific Islander Leadership Development Project Part I: Leadership. (Formerly numbered 118A.) Lecture, three to four hours. Limited to junior/senior. 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 once, course 141B). P/NP or letter grading.

141B. Asian American and Pacific Islander Leadership Development Project Part II: Field Studies. (Formerly numbered 118B.) Lecture, three hours; fieldwork, three hours. Introduction to concepts and strategies to community building and maintenance in Los Angeles. Examination of different approaches to community development, with focus on Asian American, Pacific Islander, and other ethnic communities in the Los Angeles area. P/NP or letter grading. P/NP or letter grading.

142A. Ethnocommunications I: Introduction to Creating Community Media. (4) Seminar, three to four hours. Introduction to ethnocommunications theory and methodology, developed to allow diverse peoples and cultures to reclaim and promote their histories. Viewings of ethnocommunications and alternative independent media for critique and discussion. Use of video, film, and sound control through camcorder functions, basic composition/lighting, sound recording, interviewing techniques, and production of community profile project. P/NP or letter grading.

142B. Ethnocommunications II: Intermediate Creating Community Media. (Formerly numbered 107A.) Laboratory, three hours. Continuing instruction in use of digital technology and concepts and methods of Asian Pacific American community preservation. Topics include scripting, shooting, editing, and sound control through camcorder functions, basic composition/lighting, sound recording, interviewing techniques, and production of community profile project. course 141A. P/NP or letter grading.

142C. Ethnocommunications III: Advanced Creating Community Media. (2 to 4) Laboratory, three to four hours. Advanced preparation: History 176A, 176B, 176C. Designated preparation: History 176A. Lab, three to four hours. Rapid developments in video and digital technologies have made it possible to visually document issues related to identity, migration, settlement, cultural imagery, and artistic expressions. Introduction to ethnocommunications theory and methodology, developed to allow diverse peoples and cultures to reclaim and promote their histories, experiences, and contributions through study, analysis, and vigorous usage of new media technologies. P/NP or letter grading.

143A. Fieldwork in Asian American and Pacific Islander Communities. (Formerly numbered 143A.) [Same as Anthropology M139P] Lecture, three hours; discussion, one hour. Introduction to qualitative research methods and applications of techniques in data collection, analysis, and reporting. Critical reflection of issues related to identity, migration, multiculturalism, tourism, and indigenous rights. Field excursions and guest lectures from local community included. Given in Hawaii. P/NP or letter grading.

143B. Politics of Race, Ethnicity, Migration, and Multiculturalism in Hawaii. (4) Lecture, three hours; discussion, one hour. Introduction to qualitative research methods and applications of techniques in data collection, analysis, and reporting. Critical reflection of issues related to identity, migration, multiculturalism, tourism, and indigenous rights. Field excursions and guest lectures from local community included. Given in Hawaii. P/NP or letter grading.

143C. Ethnic Identity and Ethnic Relations in Hawaii. (4) (Formerly numbered 143C.) [Same as Anthropology M177P] Lecture, three hours; discussion, one hour. Continuing construction and expression of ethnic identity in various cultural forms and social contexts in Hawaii. Overview of 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 Hawaii. In Hawaii. P/NP or letter grading.

160. Culture, Media, and Los Angeles. (4) (Formerly numbered 143A.) 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.


163. Investigative Journalism and Communities of Color. (4) (Same as Afro-American Studies M163.) Lecture, three hours; discussion, one hour. Introduction to investigative journalism and understanding interethnic conflict and cooperation. Exploration of different perspectives on issues by comparing mainstream, ethnic, and alternative media coverage. P/NP or letter grading.

164. Women, Violence, Globalization: India, Philippines, Singapore, Vietnam. (4) (Same as Women’s Studies M164A.) Lecture, four hours. Study of various forms of violence done on women not only in and of themselves but in light of larger systems of oppression, with focus on Pilipino, Vietnamese, Singaporean, and South Asian cultures. Letter grading.

165. Race, Gender, Class. (5) (Same as Comparative Literature M169.) Lecture, three hours; discussion, one hour. Examination of the concept of identity in U.S., whiteness, race and culture, and race and identity. P/NP or letter grading.

166A. Immigrant Rights, Labor, and Higher Education. (4) (Same as Chicana and Chicano Studies M156A and Labor and Workplace Studies M169A.) Seminar, three hours. New immigrant rights movement, with particular attention to labor and higher education. Examination of development of coalition efforts between labor movement and immigrant rights movement nationally and locally. Special focus on issues of immigrant 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 program on immigrant students in higher education. P/NP or letter grading.

166B. Research on Immigration Rights, Labor, and Higher Education. (Chicana and Chicano Studies M156B and Labor and Workplace Studies M166B.) Seminar, two hours. Required preparatory work for 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.

166C. Worker Center Movement: Next Wave Organizing for Justice for Immigrant Workers. (4) (Same as Afro-American Studies M167, Chicana and Chicano Studies M130, and Labor and Workplace Studies M166C.) Lecture, four hours; discussion, one hour. Examination of historical and contemporary experiences of various people in U.S. workforce; development of labor movement and examination of U.S. involvement in Korea, including study of historical, cultural, political, and socioeconomic factors that shape relations between Korea, Hong Kong, and U.S. Examination of impact of relationships in Pacific Rim and Chinese Americans and their communities. P/NP or letter grading.


168. Student-Initiated Retention and Outreach Issues in Higher Education. (4) (Same as Afro-American Studies M118, African American Studies M118, and Chicano and Chicano Studies M118.) Lecture, four hours. Exploration of issues in outreach and retention of students in higher education, especially through student-initiated programs, efforts, activities, and services. Credit may be repeated twice for credit. Letter grading.

169. Constructing Race. (4) (Same as Afro-American Studies M159P and Anthropology M159P) Lecture, four hours. Examination of construction and reconstruction of category, from anthropological perspective. Consideration of development of racial categories over time and in different regions, racial passing, multiracial identity in U.S., whiteness, race and culture, and race and identity. P/NP or letter grading.

170. Transnational Perspectives on Asian America. (4) Lecture, three hours. Not open to freshmen. Critical examination of background in Asian American political and social history. Designed for juniors/seniors. Examination of transformations that have occurred in Asian America in last four decades as consequence of global economic restructuring and new immigration. Introduction to and sustained investigation of frameworks that explore these changes in postmodern Asian American communities, using theories of transnationalism and Asian American political and racial history. Readings and discussion on transnational aspects of wide range of historical and contemporary contexts in topics such as Asian American experience. Building of linkages between roots of social constructions of race and multiracial social processes that now constitute globalizing Asian America. Theoretical readings assigned. P/NP or letter grading.


M172A. Indian Identity in U.S. and Diaspora. (Formerly numbered M172.) (Same as History M175B.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/ seniors. History of overseas Indian communities; transformations of Hinduism in diaspora; emergence of new diasporic art forms such as bhangra rap and chutney music; relations between Indians and other racial and ethnic groups; Indian women as embodiment of Indian culture; diasporic identities. P/NP or letter grading.

172B. Gender in South Asian Communities at Home and Abroad. (4) Seminar, three hours. Examination of centrality of gender to histories and identities of men and women of South Asian affiliation across multiple historical and geopolitical contexts. Focus on culture, community, and Diaspora. Students in U.K., South Asian Americans in U.S., and transnational South Asian public cultures. Theoretical approaches to study of South Asians in comparative frame and consideration of intercultural perspectives enabling envisioning South Asian American experiences and rethinking relationship between Asian American studies, diaspora studies, and area studies. P/NP or letter grading.

M172C. Transnational Bollywood. (4) (Formerly numbered 172C.) (Same as Communication Studies M137.) Lecture, three hours. Study of how popular Bollywood films, both in India and postcolonial and postimperial 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. 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; discussion, one hour. Knowledge of Vietnam ese not required. Critical and historical examination of literary and/or film representations connected to social practices such as empire, nation, diaspora, and globalization. Original language course materials available for reading and/or discussion. 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 multidisciplinary 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, including issues in cultural formation, religion, education, social class, economic development, social movement, politics, and public policy. May be repeated for credit with topic change. P/NP or letter grading.

187C. Special Courses in Asian American Populations and Communities. (4) Lecture, three hours; discussion, one hour. Limited to juniors/seniors. Variable topics in selected issues in race, ethnicity, gender, and sexuality from comparative perspective. May be repeated for credit with topic change. P/NP or letter grading.

187E. Special Courses in Transnationalism and Diasporas. (4) Lecture, three hours; discussion, one hour. 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.

191A. Topics in Research Methodologies. (4) Seminar, three to four hours. Limited to juniors/seniors. Variable topics in multidisciplinary research methodologies in Asian American studies. May be repeated for credit with topic change. P/NP or letter grading.

191B. Topics in Asian American Themes. (4) Seminar, three to four hours. Limited to juniors/seniors. Variable topics in selected Asian American themes, including issues in race, ethnicity, gender, and sexuality from comparative perspective. May be repeated for credit with topic change. P/NP or letter grading.

191C. Topics in Asian American Populations and Communities. (4) Seminar, three to four hours. Limited to juniors/seniors. Variable topics 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.

191D. Topics in Comparative Race, Ethnicity, Gender, and Sexuality. (4) Seminar, three to four hours. Limited to juniors/seniors. Variable topics in selected issues on race, ethnicity, gender, and sexuality from comparative perspective. May be repeated for credit with topic change. P/NP or letter grading.

191E. Topics in Transnationalism and Diasporas. (4) 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.

M191F. Topics in Asian American Literature. (5) (Same as English M191C.) Seminar, three or four hours. Enforced requisite: English Composition 3 or 4H. Variable special topics in Asian American literature. Topics may include genres (autobiography, novel, poetry, short fiction, or drama); specific national identities within Asian American community; themes of transnational migration; cross-cultural, interdiscipli nary, or intercultural 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.

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 in small course settings. May be repeated for credit for a maximum of 8 units. Individual contract required. Letter grading.

195. Community or Corporate Internships in Asian American Studies. (2 to 4) Tutorial, three hours. Enforced requisite: course 10 or 10W, and 20. Limited to juniors/seniors. Supervised individual research or internship for upper division students under guidance of faculty mentor to learn skills and techniques. May be repeated for credit with topic change. P/NP grading.


M198A. Course 198B is requisite to 198C. Development of honors thesis or comprehensive research project under direct supervision of faculty member. May be repeated for credit. Individual contract required. Letter grading.

198B-198C. Honors Research in Asian American Studies. (4-4) Tutorial, three hours. Requisites: courses 10 or (10W), 20, and 30 (or 30W) and one course from 104A through M108, 187A, or 191A. Introduction to research techniques and applications of methodologies in study of Asians and Pacific Islanders in U.S. Development 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 Asian American Studies. (2 to 4) Tutorial, three hours. Preparation: 3.0 overall grade-point average. Requisites: courses 10 or (10W) and 20 or comparative knowledge in Asian American studies. May be repeated for credit with topic change. P/NP or letter grading.


200B. Critical Issues in Asian American Communities. (4) Lecture, three hours. Designed for graduate students. Evaluation of traditional and contemporary theories and models of community for their appropriateness to understanding Asian Pacific American communities. Consideration of specific topics that explicate development, structure, and dynamics of Asian Pacific American communities in the study of community issues and concerns. S/U or letter grading.


200D. Asian American Literature and Culture. (4) Lecture, 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.

220. Asian American Research Methods. (4) Seminar, three hours. Introduction to empirical research methods, stressing uses and relevancy in research with ethnic minority populations. Review of characteristics and logical processes of research and applicability of scientific and scholarly inquiry in advancing knowledge. S/U or letter grading.

M215A-215B. Asian American Jurisprudence. (1 to 8 each) (Formerly numbered M215.) (Same as Law M315.) Lecture, three hours. Course M215A is enforced requisite to 215B. Designed for graduate students. Through judicial and legal contexts, and historical readings, examination of how American law has shaped demographics, experiences, and possibilities of Asian Americans and also how they shaped American law as well. May be repeated for letter (215B) grading.
as methods of social control, order, and surveillance in Asia and Pacific. S/U or letter grading.

M239. Race and Ethnicity as Concept in Practice and Research. (4) (Same as Community Health Sciences M239.) Discussion, 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 cultural competence practitioners. 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.

M261. Theorizing Third World. (4) (Same as Comparative Literature M274.) Seminar, three hours. Investigates politics of power, gender, and race in complex relationships between so-called First World and Third World, using both theoretical and textual approaches. S/U or letter grading.


297B. Asian Migration to U.S. (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 employment as teaching assistant, associate, or fellow. Teaching apprentice relationship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. Unit credit may be applied toward full-time equivalence but not toward 11-course requirement for M.A. May be repeated for credit. S/U grading.

490. Writing Workshop for Graduate Students. (2) Lecture, 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 M.A. 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 M.A. S/U grading.

596. Directed Individual Study or Research. (2 to 8) Tutorial, to be arranged. S/U or letter grading.


ASIAN LANGUAGES AND CULTURES
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Scope and Objectives
The Department of Asian Languages and Cultures offers a wide range of courses in the languages, literatures, religions, and cultural heritages of China, Japan, and Korea, as well as South and Southeast Asia. The department offers training in many specialized fields such as archaeology, film, folklore, history, linguistics, literature, mythology, religious studies, and cultural studies. Courses prepare students for careers in business, government service, international relations, journalism, law, publishing, teaching, and academic professions.

Undergraduate majors earn a Bachelor of Arts degree. The graduate program offers Master of Arts and Ph.D. degrees. At all levels of study, various major fields are possible.

For undergraduates, the department offers majors that combine language study with courses taught in English that examine the rich cultural heritage of China, Japan, and Korea, as well as South and Southeast Asia. The majors also provide opportunities for education abroad in an Asian country. The language courses aim to develop the four skills of speaking, aural comprehension, reading, and writing in a balanced and mutually supportive manner. The lecture and seminar courses aim to develop critical thinking and writing skills through in-depth study of a culture within a broader historical and comparative context.

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 a program leading to an M.A. degree in several fields of Asian culture. The M.A. degree is preparatory to entrance into the Ph.D. program. The Ph.D. program, which is very selective, trains research scholars for academic careers in specialized fields.

Courses for Nonmajors
The department offers many courses in which knowledge of Asian languages is not required. A current list is available in the department office (290 Royce Hall) and at http://www.alc.ucla.edu.

Undergraduate Study

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 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 requirements is available in the department office (290 Royce Hall) and at http://www.alc.ucla.edu.

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 http://www.alc.ucla.edu 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 B.A.

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 6, Indonesian 6, Japanese 6, 10, Korean 6, 10, Thai 6, Vietnamese 6, or equivalent) and one civilization course (e.g., Chinese 50, Japanese 50, 70, Korean 50) or one introduction to religions course (e.g., Asian 60, 60W, 61, Chinese 60, 60W, Korean 60, South Asian 60, or Southeast Asian 60).

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, or one year of Sanskrit, and one introduction to Buddhism or one introduction to Asian religions course.

Refer to the UCLA Transfer Admission Guide at http://www.admissions.ucla.edu/prospect/adm_tr.htm 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 Religions B.A.

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 6, Indonesian 6, Japanese 6, 10, Korean 6, 10, Thai 6, Vietnamese 6, or equivalent) and one introduction to religions course from Asian 60, 60W, 61, Chinese 60, 60W, Korean 60, South Asian 60, or Southeast Asian 60.

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 or one introduction to Asian religions course.

Refer to the UCLA Transfer Admission Guide at http://www.admissions.ucla.edu/prospect/adm_tr.htm 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 B.A.

Preparation for the Major

Required: Chinese 6 or 10 or equivalent, and 50 or 60 or 60W.

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 at http://www.admissions.ucla.edu/prospect/adm_tr.htm for up-to-date information regarding transfer selection for admission.

The Major

Required: Five upper division Chinese language courses (of which at least two must be in the premodern language or texts), one upper division Chinese literature course, three upper division electives on China, and two upper division electives within the department outside of China.

Japanese B.A.

Preparation for the Major

Required: Japanese 6 or 10 or equivalent, and 50 or 70.

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 at http://www.admissions.ucla.edu/prospect/adm_tr.htm for up-to-date information regarding transfer selection for admission.

The Major

Required: Five upper division Japanese language courses (of which at least two must be in the premodern language or texts), one upper division Japanese literature course, three upper division electives on Japan, and two upper division electives within the department outside of Japan.

Korean B.A.

Preparation for the Major

Required: Korean 6 or 10 or equivalent, and 50 or 60.

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 at http://www.admissions.ucla.edu/prospect/adm_tr.htm for up-to-date information regarding transfer selection for admission.

The Major

Required: Five upper division Korean language courses, one upper division Korean literature course, three upper division electives on Korea, and two upper division electives within the department outside of 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.
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. The upper division language courses provide students with 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 6, Indonesian 6, Japanese 6, 10, Korean 6, 10, Thai 6, Vietnamese 6, or equivalent) and one civilization course (e.g., Chinese 50, Japanese 50, 70, Korean 50) or one introduction to religions course (e.g., Asian 60, 60W, 61, Chinese 60, 60W, Korean 60, South Asian 60, Southeast Asian 60) 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.

No more than 4 units may be applied toward both this minor and a major or minor in another department or program, 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, http://www.gdnnet.ucla.edu/gasala/library/pgmqrintro.htm. 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 (M.A.), Candidate in Philosophy (C.Phil.), and Doctor of Philosophy (Ph.D.) degrees in Asian Languages and Cultures.

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 corresponding earliest developments, their antiquity and, in case of China, Churr and Mesoamerica, their evident isolation 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 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.

60W. Introduction to Buddhism. (5) Lecture, three hours; discussion, one hour. Not open for credit to students with credit for course 60. Knowledge of Asian languages not required. General survey of development of Buddhism in India, with focus on those religious doctrines and meditative practices most essential to various Asian traditions of Buddhism. Letter grading.

60W. Introduction to Buddhism. (5) Lecture, three hours; discussion, one hour. Enforced requisite: English Composition 3 or 3H or English as a Second Language 35. Not open for credit to students with credit for course 60. Knowledge of Asian languages not required. General survey of Buddhist worldview and life-style, with focus on those religious doctrines and meditative practices most essential to various Asian traditions of Buddhism. Particular attention to problems involved in study of religion. Satisfies Writing II requirement.

61. Introduction to Zen Buddhism. (5) 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 concerns in East Asia. Topics include role of 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, and Vietnam. Topics include popular religion, language, literature, arts, material culture, cinema, and music. Themes include identity, gender, sexuality, and class relations. 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, and Vietnam. Topics include popular religion, language, literature, arts, material culture, cinema, and music. Themes include identity, gender, sexuality, and class relations. Letter grading.

70A. 17th through 19th Centuries; 70B. 1895 to 1945; 70C. From 1945.

Upper Division Courses

120. Languages and Cultures of East Asia. (4) Lecture, three hours; discussion, one hour. Recommend preparation: Chinese 3 or 50 or Japanese 3 or 50 or Korean 3 or 50. Comparative perspective 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 larger cultural settings in which these three languages are used. P/NP or letter grading.

120FL. Readings in East Asian Languages. (2) Seminar, two hours. Prerequisites: Chinese 6 or 6A or 6C or Japanese 6 or Korean 6 or 6A. Enforced corequisite: course 120. Additional work 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) (Formerly numbered Southeast Asian 120.) 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.

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 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.

161. Topics in Asian Religions. (4) Lecture, three hours. Knowledge of Asian languages not required. In-depth examination of selected topics in one or more religious traditions of Asia. Topics vary, but may include death, gender, and state and religion. May be repeated for credit with topic change. Letter grading.

162. Buddhist 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 yogic and pranayama techniques, meditation techniques, and meditative practices of the Buddha and various historical figures. Letter grading.

163. Buddhism across Boundaries. (4) Lecture, two hours; on-campus seminar, one hour. Recommended preparation: prior course on Buddhism or traditional Asian religious traditions. 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.

164. Buddhism and Early Religious History of Pakistan, Afghanistan, and Central Asia: Introduction. (4) Lecture, three hours. Knowledge of Asian languages not required. Survey of regions and religions of Central Asia, especially Buddhism in Afghanistan and Pakistan. Topics include political, social, and historical material, and linguistic approaches to history of religions. Letter grading.

C170. Approaches to Study of Religion. (4) Seminar, one hour. Corequisites: course 198 or 199. Designed to bring together advanced undergraduate students undertaking individual supervised 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.

191H. Honors Research Seminars: Asian Languages and Cultures. (4) Seminar, three hours. Limited to departmental honors students. Introduction 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. (2) Seminar, two hours. Limited to undergraduate students. Introduction to latest scholarship in field of Asian studies. Attendance at selected scholarly presentations required, as well as sessions with faculty adviser to discuss presentations and published works of speakers. May be repeated for credit. P/NP grading.

195. Community Internships in Asian Languages and Cultures. (2 to 8) Seminar, eight hours. Limited to seniors/juniors. Internship in supervised setting in community cultural or organizational setting. Students meet on regular basis with instructor and provide periodic journal reports of their experiences. Final paper that combines academic research and knowledge gained from community experience required. Individual contract with supervising faculty member required. P/NP or letter grading.

198A-198B-198C. Honors Research in Asian Languages and Cultures. (4-4-4) Tutorial, three hours. Limited to junior/senior departmental majors. May be repeated for credit with topic change. Enforced prerequisites: course 198A. Formerly numbered 198F. Preparation: under-graduate departmental seminar. Development of honors thesis under direct supervision of faculty member. Letter grading.

202. Proseminar: Functional Approaches to Japanese Language. (2 or 3) Tutorial, to be arranged. Recommended preparation: advanced knowledge of one Asian language. Limited to juniors/seniors. Supervised 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) Seminar, three hours. Research methodologies for East Asian languages, with emphasis on compiling bibliographic data and using professional resources for research. Exercises in analyzing language examples, theoretical implications of linguistic data, and applications of functional linguistics in order to explain plain language phenomena. S/U or letter grading.

201. Proseminar: Approaches to Buddhist Studies. (4) Seminar, three hours. Designed for graduate students. May be repeated for credit with consent of instructors. 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 and in-depth analysis of linguistic data. Topics include linguistic structure, communicative function, pragmatics, language, society, and culture, and language change. May be repeated for credit. S/U or letter grading.

205. Variable Topics in East Asian Culture and History. (4) Seminar, three hours. Selected topics in East Asian culture and history. May be repeated for credit with topic change. S/U or letter grading.

210. Proseminar: Cultural and Comparative Studies. (4) Seminar, three hours. Designed for graduate students. Introduction to topic of current relevance to comparative study of East Asian cultures in modern period. Readings include Western theoretical works balanced with texts taking congruent approaches to East Asian topics. S/U or letter grading.


220A-220B. Seminars: Topics in Cultural Studies. (4) Seminar, three hours. Complements course 220. 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. Seminars: Corpus Linguistics. (4-4) Seminar, three hours. Construction and exploitation of computerized 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 working with East Asian language corpora. In Progress (222A) and S/U or letter (222B) grading.

230A-230B. Seminars: Theoretical Topics in East Asian Literature. (4-4) Seminar, three hours. Preparation: 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, ideology, interaction between high and low culture, 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 Asianists. Focus on Asian writings in course 245B. In Progress (245A) and letter (245B) grading.

251. Seminar: Literary Theory. (5) Same as Comparative Literature 252B, English 2570, French 2570, German 2570, Italian 2570, Scandinavian 2570, and Spanish 252B.) Seminar, three hours. Advanced interdisciplinary seminar to explore philosophical, historical, social, and critical foundations of literary theory as well as current issues in literary and cultural studies. S/U or letter grading.

255. Topics in Southeast Asian Literature and/or Cinema. (4) Seminar, three hours. Knowledge of one Southeast Asian language required but not required. Theoretical concerns raised by works from Southeast Asia, one or more of Southeast Asia, and/or Southeast Asian diaspora. Critical and historical examination of literature and/or film representations connected to practices of empire, nation, diaspora, and globalization. May be repeated for credit. S/U or letter grading.

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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 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, lexicon, culture, and idioms.

4A. 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 4A. 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 5. 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 5. 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. 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 6C is equivalent to completion of course 6. P/NP or letter grading.

8. Elementary Chinese: Intensive. (15) Lecture, 10 hours; discussion, 10 hours. Not open to students who have learned, from whatever source, enough Chinese to qualify for more advanced courses. Intensive course equivalent to courses 1, 2, and 3. Introduction to fundamentals of standard Chinese, including pronunciation, grammar, and Chinese characters, with emphasis on all four basic language skills — speaking, listening comprehension, reading, and writing. Offered in summer only. P/NP or letter grading.
Upper Division Courses

100A-100E. Advanced Modern Chinese. (4-4-4) Lecture, two hours; discussion, two hours. Enforced requisite: course 6, 6A, or 10 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 100E; course 100B with grade of C or better or Chinese placement test is enforced requisite to 100D; course 100D with grade of C or better or Chinese placement test is enforced requisite to 100C; Third-year Chinese. Not open to students who have learned Chinese to qualify for more advanced courses. Materials selected from contemporary Chinese publications, with emphasis on social sciences. Texts analyzed for their linguistic features and social and cultural background. Readings, compositions, informal debates on topical issues, and oral presentations. P/NP or letter grading.

100D-100E-100F. Advanced Modern Chinese for Heritage Speakers. (4-4-4) Lecture, two hours; discussion, two hours. Enforced requisite: course 6A 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 Chinese to qualify for more advanced courses. Materials selected from contemporary Chinese publications, with emphasis on social sciences. Texts analyzed for their linguistic features and social and cultural background. Readings, compositions, informal debates on topical issues, and oral presentations. P/NP or letter grading.

100I. Advanced Modern Chinese: Intensive. (12) Lecture, 10 hours; discussion, 10 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 50. Knowledge of Chinese not required. Introduction to most important aspects of Chinese culture. Topics include Chinese language learning; history; introduction to the development of Chinese society, issues of ethnicity, Chinese language and philosophy, and early scientific and technological innovation. Satisfies Writing II requirement. Letter grading.

60. Introduction to Chinese Religions. (5) Lecture, three hours; discussion, one hour. Not open for credit to students with credit for course 60W. Knowledge of Chinese not required. General survey of religious life in China, with emphasis on everyday religious practice over doctrine, and themes common to Buddhism, Daoism, and Confucianism. P/NP or letter grading.

60W. Introduction to Chinese Religions. (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 60. Knowledge of Chinese not required. General survey of religious life in China, with emphasis on everyday religious practice over doctrine, and themes common to Buddhism, Daoism, and Confucianism. Satisfies Writing II requirement. Letter grading.

70. Classics of Chinese Literature. (5) Lecture, three hours; discussion, one hour. Not open for credit to students with credit for course 70W. Prior knowledge of Chinese culture, literature, or language not required. Introduction to pre-20th-century Chinese literary tradi-
tions, including selections from poetry, prose, fiction, and drama. P/NP or letter grading.

70W. Classics of Chinese Literature. (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 70. Prior knowledge of Chinese culture, literature, or language not required. Introduction to pre-20th-century Chinese literary traditions, including selections from poetry, prose, fiction, and drama. Satisfies Writing II requirement. Letter grading.

97. Variable Topics in Chinese Culture. (4) Lecture, three hours. Knowledge of Chinese language or culture not required. Variable topics course covering many different aspects of Chinese culture. 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.

103. Topics in Chinese Language and Culture. (2 to 4) Lecture, three hours. Chinese language and culture - special topics. May be repeated for credit. Offered in summer only. P/NP or letter grading.

C107A-C107B. Academic/Professional Chinese. (4-4) Lecture, three hours; discussion, one hour. Enforced requisite: course 101B or Chinese placement test. In-
troduction to contemporary Chinese 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) Lecture, two hours. Enforced requisite: course 100C or 100I or Chinese placement test. Students must be concurrently enrolled in affiliated main course. Additional 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.

120. Introduction to Chinese Linguistics. (4) Lecture, three hours; discussion, one hour. Requisite: course 6A, 6C, 10. Introduction to Chinese sound system, writing system and its reform, regional differences, major structural features, language in society and cultural practices and in cultural products. Concurrently scheduled with courses C238. P/NP or letter grading.

135. Chinese-Language Film and Culture. (4) Lecture, three hours; discussion, one hour; film viewing, three hours. Enforced requisite: course 60C or 100C or Chinese placement test. Viewing and discussion of Chinese films, along with relevant readings in Chinese. Letter grading.

C138. Travel Writing in Premodern China. (4-4) 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 throughout centuries. Concurrently scheduled with course C238. Letter grading.


C150A. Lyrical Traditions. (4) Lecture, three hours; discussion, one hour. Knowledge of Chinese not re-
quired. Introduction to Chinese and literary gardens in China, with focus on English translations of texts by native writers and recent Western scholarship. Letter grading.
150B. Chinese Literature in Translation: Traditional Narrative and Fiction. (4) Lecture, three hours; discussion, one hour. Knowledge of Chinese not required. Readings from narrative and dramatic writings of traditional China, with emphasis on self and society, growth of fictionality, subjectivity, and gender representation. May be taken independently for credit. Letter grading.


155. Topics in Contemporary Chinese Literature and Film. (4) Lecture, two hours; discussion, one hour; film viewing, three hours. Knowledge of Chinese not required. In-depth look at Chinese immigrant experience by examining the works of Chinese immigrants. Letter grading.

156. Neo-Confucianism. (4) (Same as Anthropology M119.) Lecture, three hours; discussion, one hour. Examination of role of Confucianism in modern China, with special emphasis on the interaction between Confucianism and modernity. Letter grading.

157. Contemporary Chinese Popular Culture. (4) Lecture, three hours; discussion, one hour. Examination of various aspects of modern and contemporary popular culture in China, Taiwan, and Hong Kong from cultural studies perspective. Genres and media include literature, print culture, cinema, martial arts film and fiction, television, radio, pop music, visual arts, fashion, advertising, and cyberculture. P/NP or letter grading.


165. Introduction to Chinese Buddhist Texts. (4) Lecture, three hours; discussion, one hour. Recommended prerequisite: course 101B or 110B for Japanese 110 or Korean 100 or Chinese placement test. Readings in premodern Buddhist texts written in literary Chinese and taken from translated Indian sutras, indigenous exegetical works, Chinese apocryphal scriptures, and Chan writings. Problems in translation from Indo-European languages into Chinese; evolution of Chinese Buddhist terminology. Coverage varies. May be repeated for credit with consent of instructor. Letter grading.


C175. Introduction to Chinese Thought. (4) Lecture, three hours; discussion, one hour. Knowledge of Chinese not required. Survey of corpus of traditional Chinese thought portrayed 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 development of ideas against challenges from Mohists, Taoists, and other groups of thinkers. Concurrently scheduled with course C275. 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 Confucianist and Neo-Confucianist thought. 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 early global trade. Investigation based on archaeological study of porcelain, tracing movement from kilns across China trading ports to shipwrecks and consuls' societies in Southeast Asia and colonial Americas. As one of most important commodities 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 M116S.) Lecture, three hours; discussion, one hour. 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. Last 500 years at various scales, from emergence of early cities to rise of metropolitan centers and formation of imperial landscapes. Letter grading.

184. Crime, Law, and Punishment in Traditional China. (4) Lecture, three hours; discussion, one hour. Preventing crime and administering justice are important parts of any society, but these are not straightforward or simple processes. What is crime? Are there crimes so terrible that they merit special kinds of punishment? How is punishment decided and by whom? What happens if justice is not carried out? Consideration of these questions as they apply to premodern China from multiple perspectives: legal codes and casebooks, literary re-imaginings of trials, depictions of postmortem punishment, and tales of supernatural retribution. Discussion of how legal and penal systems of China have been represented in West. Letter grading.

185. Food and Love in Chinese Culture. (4) Lecture, three hours; discussion, one hour. Knowledge of Chinese not required. Based on studies of cultural, historical, anthropological, and archaeological materials, introduction to how Chinese have been engaging themselves in fields of food eating and love making. Letter grading.

186. Archaeology in China. (4) Lecture, three hours; discussion, one hour. Knowledge of Chinese not required. Early Chinese study of their own past, types of artifacts, beginnings of scientific archaeology, and surveys of major excavations of sites of all periods. Letter grading.

187. Chinese Etymology and Calligraphy. (4) Lecture, three hours; discussion, one hour. Recommended prerequisite: course 3 of development of Chinese writing system from pottery inscriptions 6,000 years ago to modern simplified forms and studies of six scripts principles that were to form Chinese characters. Particular emphasis on Chinese artistic appreciation and its appreciation, with focus on ways of recognizing and interpreting cursive style, common form of handwriting. Letter grading.


191B. Variable Topics Research Seminars: 20th-Century China and Taiwan. (4) Formerly numbered 191A. Seminar, three hours. Designed for juniors/seniors. Research seminar on selected topics in modern and contemporary literature and culture from China and Taiwan. Reading, discussion, and development of culminating project. May be repeated for credit. Letter grading.

197. Individual Studies in Chinese. (4) Tutorial, to be arranged. Limited to juniors/seniors and graduate students who desire more advanced or specialized instruction in Chinese. Individual meeting with instructor scheduled to meet at times agreed upon. May be repeated for credit. Individual study arranged. Consent of instructor required; see undergraduate adviser. P/NP or letter grading.

Graduate Courses

200A. Research Methods in Chinese. (4) Seminar, three hours. Recommended prerequisite: course 110C. Lectures and discussion designed to develop research skills in using traditional Chinese research materials. 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 Culture. (4) Seminar, three hours. Introduction to major bibliographical and methodological resources in fields of modern Chinese literature and cinematic studies, with focus on theoretical tools, historical knowledge, and critical trends. 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 science disciplines. S/U grading.


C207A-C207B. Academic/Professional Chinese. (4-5) Three hours; discussion, one hour. For advanced learners. Enforced prerequisite: 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 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 written in both 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.


211A-211B. Seminars: Classical Chinese Poetry. (4-4) Seminar, three hours. Preparation: reading knowledge of classical Chinese. Topics rotate among 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 poietic tradition, with focus on individual poets, themes, or other critical issues. May be repeated for credit with consent of instructor. Letter grading.

213A-213B. Chinese-Language Cinemas. (4-4) (Formerly numbered 213.) Seminar, three hours; film-viewing laboratory, two hours. Advanced topics in Chinese-language cinema. Examination of theory, methodology, historiography, industry and institutions, style and aesthetics, major genres and artists, other arts and media, other cinematic traditions, and social contexts. May be repeated for credit with consent of instructor. In Progress (213A) and letter (213B) grading.

217A-217B. 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.

218A. Seminar: Topics in Chinese Applied Linguistics. (2,4) Seminar, two hours. Critical reading and discussion of selected topics in Chinese applied linguistics (teaching Chinese as a second language, second language acquisition theories and practices). May be repeated for credit with consent of instructor. S/U or letter grading.

230A-230B. Seminars: Selected Topics in Modern Chinese Literature. (4-4) Seminar, three hours. Selected 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.


242A-242B. Chinese Classics and Exegetical Traditions. (4-4) (Formerly numbered 242B.) Seminar, three hours. Recommended preparation: command of literary Chinese, familiarity with Chinese civilization and Chinese dynastic history. Other topics include cultural developments of ancient and medieval China. May be repeated for credit. In Progress (295A) and letter (295B) grading.

297A. Seminar: Research Topics in Premodern China. (4) Seminar, three hours. Selected topics in premodern Chinese literature, history or religion, with emphasis on textual readings and independent research. S/U or letter grading.

297B. Seminar: Research Topics in Modern Chinese and Sinophone Culture. (4) Seminar, three hours. Selected topics in modern Chinese and Sino-phone culture, with major emphasis on independent research. S/U or letter grading.

Filipino Lower Division Courses

1. Introductory Filipino. (5) (Formerly numbered Southeast Asian 70A.) Lecture, five hours. Coverage of basic Filipino/Tagalog grammar, with equal emphasis on reading, writing, conversation, and comprehension. P/NP or letter grading.

2. Introductory Filipino. (5) (Formerly numbered Southeast Asian 70B.) Lecture, five hours. Enforced prerequisite: course 2 with grade of C or better. Coverage of basic Filipino/Tagalog grammar, with equal emphasis on reading, writing, conversation, and comprehension. P/NP or letter grading.

3. Intermediate Filipino. (5) (Formerly numbered Southeast Asian 70C.) Lecture, five hours. Enforced prerequisite: course 3 with grade of C or better. Reinforcement of basic Filipino/Tagalog grammar, with coverage of more advanced topics. Broadening of skills in conversation and composition; reading of selected texts. P/NP or letter grading.

4. Intermediate Filipino. (5) (Formerly numbered Southeast Asian 71A.) Lecture, five hours. Enforced prerequisite: course 3 with grade of C or better. Reinforcement of basic Filipino/Tagalog grammar, with coverage of more advanced topics. Broadening of skills in conversation and composition; reading of selected texts. P/NP or letter grading.

5. Intermediate Filipino. (5) (Formerly numbered Southeast Asian 71B.) Lecture, five hours. Enforced prerequisite: course 4 with grade of C or better. Reinforcement of basic Filipino/Tagalog grammar, with coverage of more advanced topics. Broadening of skills in conversation and composition; reading of selected texts. P/NP or letter grading.

6. Intermediate Filipino. (5) (Formerly numbered Southeast Asian 71C.) Lecture, five hours. Enforced prerequisite: course 5 with grade of C or better. Reinforcement of basic Filipino/Tagalog grammar, with coverage of more advanced topics. Broadening of skills in conversation and composition; reading of selected texts. P/NP 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 emphasis on reading, writing, conversation, and comprehension. Offered in summer only. P/NP or letter grading.

Upper Division Courses

100A. Advanced Filipino: Reading and Writing. (4) (Formerly numbered Southeast Asian 170A.) Lecture, three hours. Enforced prerequisite: course 6 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 pieces from several genres of contemporary Filipino writing. P/NP or letter grading.

109. Advanced Tutorial Instruction in Filipino. (2) Tutorial, two hours. Enforced prerequisite: course 6 or Filipino/Tagalog placement test. Tutorial and guided independent study to help students develop advanced proficiency in oral and written Filipino. May be repeated for credit. P/NP or letter grading.

130A. Filipino Short Story. (4) (Formerly numbered Southeast Asian 175.) Lecture, three hours. Enforced prerequisite: course 6 or Filipino/Tagalog placement test.
Hindi-Urdu

Lower Division Courses

1. Introductory Hindi-Urdu. (5) (Formerly numbered South Asian 40A.) Lecture; two hours, discussion, three hours. Coverage of basic Hindi grammar, with equal emphasis on reading, writing, conversation, and comprehension. Enforced prerequisite: course 1 with grade of C or better. Recommended preparation: speaking and listening skills in Hindi-Urdu. Training in reading and writing skills at elementary level, equivalent to comple-

2. Introductory Hindi-Urdu. (5) (Formerly numbered South Asian 40B.) 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 reading, writing, conversation, and comprehension. P/NP or letter grading.

3. Introductory Hindi-Urdu. (5) (Formerly numbered South Asian 40C.) Lecture; two hours, discussion, three hours. Enforced requisite: course 2 with grade of C or better. Coverage of basic Hindi grammar, with equal emphasis on reading, writing, conversation, and comprehension. P/NP or letter grading.

4. Intermediate Hindi-Urdu. (5) (Formerly numbered South Asian 41A.) Lecture; two hours, discussion, three hours. Enforced requisite: course 2 with grade of C or better. Coverage of basic Hindi grammar, with equal emphasis on reading, writing, conversation, and comprehension. P/NP or letter grading.

5. Intermediate Hindi-Urdu. (5) (Formerly numbered South Asian 41B.) Lecture; two hours, discussion, three hours. Enforced requisite: course 3 with grade of C or better. Reinforcement of basic Hindi 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 Hindi-Urdu. (5) (Formerly numbered South Asian 41C.) Lecture; two hours, discussion, three hours. Enforced requisite: course 3 with grade of C or better. Reinforcement of basic Hindi grammar and coverage of more advanced topics. Broadening of skills in conversation and composition; reading of selected texts. P/NP or letter grading.

7. Advanced Tutorial Instruction in Hindi-Urdu. (2) Tutorial, two hours. Enforced requisite: course 3 with grade of C or better. Enforced prerequisite: course 2 with grade of C or better. Preparation for more advanced study of Hindi-Urdu, including study of contemporary and classical Hindi-Urdu literature. P/NP or letter grading.


9. Images of Japan: Literature and Film. (5) (Formerly numbered 60.) Lecture, three hours; discussion, one hour. Knowledge of Japanese culture, literature, or language not required. Introduction to visual and textual images of Japan's literary heritage, including documentary and feature films based on Japan's literary classics. Letter grading.
Upper Division Courses

100A-100B-100C. Advanced Modern Japanese. (4-4-4) Lecture, three hours; discussion, one hour. Enforced requisite: course 100C or 100A or Japanese placement test. Test open to students who have learned, from whatever source, enough Japanese to qualify for more advanced courses. Advanced readings and discussion for students planning to do advanced coursework or research on Japan. Topics selected from magazines, journals, and books related to humanities and social sciences. Each course may be taken independently for credit. Students who complete courses 102A and/or 102B are not eligible to take Japanese 101 series or below. P/NP or letter grading.

103. Advanced Japanese for International Business. (4) Lecture, three hours; discussion, one hour. Enforced requisite: course 6 or 10 or 100B 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 advanced specialized oral and written communication skills as well as high degree of cultural training. Oral and written business communication, social etiquette in business conduct, Japanese economic and business climate, business law and regulations, resources and environment, and business case studies. P/NP or letter grading.

108FL. Special Studies: Readings in Japanese. (2) Seminar, two hours. Enforced requisite: course 100C or 100A 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.


110B. Introduction to Classical Japanese: Reading Proficiency. (4) Lecture, three hours; discussion, one hour. Enforced requisite: course 100C or 100A or Japanese placement test. Introduction to fundamentals of classical Japanese. Grammar and reading of selected premodern texts. P/NP or letter grading.


114. Japanese Literature in Translation: Modern. (4) Lecture, three hours; discussion, one hour. Requisite: English Composition 110 or 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.


116. Japanese Urban History and Culture. (4) Lecture, three hours; discussion, one hour. Requisite: course 100C or 100A or Japanese placement test. Open to students who have learned, from whatever source, enough Japanese to qualify for more advanced courses. Advanced readings and discussion for students planning to do advanced coursework or research on Japan. Topics selected from magazines, journals, and books related to humanities and social sciences. Each course may be taken independently for credit. Letter grading.


118. Love in Modern Japan. (4) Lecture, three hours. Examination of Japanese literary works (in English) and films that represent romantic love from late 19th century to present. P/NP or letter grading.

119. Variable Topics in Culture and Society in Japan. (2) Lecture, three hours; corequisite, 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 creative writing project. May be repeated for credit with topic change. Concurrently scheduled with course C259. P/NP or letter grading.

120. Advanced Reading and Writing for Japanese-Heritage Speakers. (4-4) Lecture, three hours; discussion, one hour. Knowledge of Japanese not required. Development of Buddhism in Japan in its cul-
C182. Japanese Folklore. (4) Lecture, three hours; discussion, one hour. Knowledge of Japanese not required. Lectures/discussions on native religious rituals (festivals) and observances of Japanese, with special emphasis on artistic behavior. Discussion of Shinto, Shinto/Buddhist syncretism, and other non-Buddhist belief systems. Concurrently scheduled with course C282. Letter grading.


C224A-C224B. Seminars: Selected Topics in Japanese Discourse Linguistics. (4-4) Seminar, three hours. Recommended preparation: course CM227 or comparable knowledge of selected topics in Japanese discourse linguistics. May be repeated for credit with consent of instructor. In Progress (224A) and letter (224B) grading.

C225A-C225B. Seminars: Linguistic Analysis of Japanese Narratives. (4-4) Seminar, three hours. Required: course CM122. Analysis of selected modern and classical Japanese narratives. Emphasis on exploration of how grammatical features such as tense, aspect, voice, and point of view are utilized to achieve desired literary effects. May be repeated for credit with consent of instructor. In Progress (225A) and letter (225B) grading.

C226. 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 background for developments in Japanese discourse linguistics. May be repeated for credit with consent of instructor. S/U or letter grading.


C228. Fundamentals in Discourse Data 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 data organization, data classification procedures, and data organization, analytical frameworks. Letter grading.

C231. Nation in Modern Japanese Intellectual Discourse. (4) Lecture, three hours. Recommended preparation: advanced knowledge of Japanese, course 100C or 100I 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 discourses of this period, particularly in relation to politics of imperialism. Concurrently scheduled with course C131. Letter grading.

C235A-C235B. Seminars: Selected Topics in Modern Japanese Fiction. (4-4) Seminar, two hours. Recommended preparation: two or more years of Japanese literature. May be repeated for credit with consent of instructor. In Progress (235A) and letter (235B) grading.

C240A-C240B. Seminars: Selected Topics in Japanese Literature. (4-4) Seminar, three hours. May be repeated for credit. In Progress (240A) and letter (240B) grading.

C241A-C241B. Seminars: Japanese Classics. (4-4) Seminar, three hours. Poem and poetry from early times to 1868. May be repeated for credit with consent of instructor. In Progress (241A) and letter (241B) grading.


C245A-C245B. Seminars: Medieval Japanese Literature. (4-4) Seminar, three hours. Recommended 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.


C259. Variable Topics in Culture and Society in Ja-pan. (4) Lecture, three hours; discussion, one hour. Examination of relationship between culture (art, literature, film) and society in Japan. Reading, audio and visual material, discussion, and development of culmi-nating 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 (performance of the arts) comprising music, dance, storytelling, viewing, purification, divination, divinage, 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.


C273. Imperial Culture in Ancient Japan. (4) Le-cure, three hours; discussion, one hour. Requisite: course 50. Knowledge of Japanese not required; basic knowledge of Japanese history and culture assumed. Examination of formation of imperial-style state and its surrounding reality. Discussion of different space formations such as spaces of privacy, intimacy, seclusion, and religion. Major sources from literary texts (ancient and modern), premodern debates on arts, and works by modern and contemporary Japanese philosophers. In Progress (270A) and letter (270B) 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 Ko-rean to qualify for more advanced courses. Introduction to standard spoken Korean and Korean writing, with emphasis on conversation. P/NP or letter grading.

1A. Elementary Korean for Korean-Heritage Speak-ers. (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. Designed for Korean-Heritage learners who have very limited knowledge in Korean language or have had no formal training in it. Emphasis on spell-ing, basic grammar, reading, writing, and daily conversa-tion. P/NP or letter grading.

2. Elementary Modern Korean. (5) Lecture, two hours; discussion, three hours. Enforced requisite: course 1A with grade of C or better. Not open to students who have learned, from whatever source, enough Korean to qualify for more advanced courses. Continuation of course 1. P/NP or letter grading.

2A. Elementary Korean for Korean-Heritage Speak-ers. (5) Lecture, two hours; discussion, three hours. Enforced requisite: course 1A 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 are from Korean-speaking family background and have some limited knowledge of Korean. Emphasis on formal aspects of standard Korean (basic grammar, reading, daily conversation, polite forms, ba-sic writing). P/NP or letter grading.

3. Elementary Modern Korean. (5) Lecture, two hours; discussion, three hours. Enforced requisite: course 2A 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. Continuation of course 2. P/NP or letter grading.

3A. Elementary Korean for Korean-Heritage Speak-ers. (5) Lecture, two hours; discussion, three hours. Enforced requisite: course 2A 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. Continuation of course 2A. P/NP or letter grading.

4. Intermediate Modern Korean. (5) Lecture, five hours. Enforced requisite: course 3 with grade of C or better or Korean placement test. Not open to students who have learned, from whatever source, enough Ko-rean to qualify for more advanced courses. Designed for 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 inter-mEDIATE level. Continuation of course 3A. P/NP or letter grading.

5. Intermediate Modern Korean. (5) Lecture, five 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 Ko-rean to qualify for more advanced courses. Continuation of course 4A. 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 have learned, from whatever source, enough Ko-rean to qualify for more advanced courses. Designed for Korean-Heritage learners. Emphasis on four skills (spelling, grammar, reading, and conversation 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, reading, and conversation in modern Korean). P/NP or letter grading.

7. Elementary Korean: Intensive. (5) Lecture, 10 hours; discussion, 10 hours. Not open to students who have learned, from whatever source, enough Korean to qualify for more advanced courses. Intensive course equivalent to courses 2, 2A, and 3. Introduction to fundamen-tals of standard Korean, including pronuncia-tion, grammar, and Korean characters, with emphasis on all four basic language skills — speaking, listening, comprehension, reading, and writing. Offered in sum-mer only. P/NP or letter grading.

8. Intermediate Modern Korean: Intensive. (15) Lecture, 10 hours; discussion, 10 hours. Enforced requisite: course 6 with grade of C or better. Not open to students who have learned, from whatever source, enough Korean to qualify for more advanced courses. Intensive course equivalent to courses 4, 4A, and 5. Conversation, com-position, and readings with structural analysis in mod-ern Korean. Offered in summer only. P/NP or letter grading.


10. Introduction to Korean Religions. (5) Lecture, three hours; discussion, one hour. Knowledge of Asian languages not required. General survey of history of religions in Korea — Shamanism, Buddhism, Confu-
100A-100B-100C. Advanced Modern Korean. (4-4-4) Lecture, five hours. Enforced requisite: course 64A, 6A, or 101A or 101B or better or Korean placement test. Course 100A with grade of C 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. Continuation of courses 64A. Readings of modern prose and poetry, with emphasis on grammar and Sino-Korean. P/NP or letter grading.

101A-101B-101C. Advanced Readings in Modern Korean. (4-4-4) Lecture, three hours. Enforced requisite: course 100C or Korean placement test. Course 101A or Korean placement test is enforced requisite to 101B; course 101B or Korean placement test is enforced requisite to 101C. Not open to students who have learned, from whatever source, enough Korean to qualify for more advanced courses. Continuation of courses 64A. Readings and discussion for students planning to do advanced coursework or research on Korea. Topics selected from magazines, journals, and books related to humanities and social sciences. P/NP (undergraduates), SU (graduates), or letter grading.

101A. Advanced Korean Conversation. (4-4-4) Lecture, three hours. Enforced requisite: course 100C or Korean placement test. Course 102A or Korean placement test is enforced requisite to 102B; course 102B or Korean placement test is enforced requisite to 102C. Not open to students who attended elementary school in Korea for more than two years or who have learned, from whatever source, enough Korean to qualify for more advanced courses. Reading and discussion of modern Korean authors, designed to further improve spoken proficiency. P/NP or letter grading.

103A-103B-103C. Readings in Sino-Korean Characters. (4-4-4) Lecture, three hours. Enforced requisite: course 100C or Korean placement test. Course 103A or Korean placement test is enforced requisite to 103B; course 103B or Korean placement test is enforced requisite to 103C. Sino-Korean vocabulary and characters necessary for advanced and superior level of knowledge in Korean. Sino-Korean characters are used differently from same Chinese characters used in contemporary China in terms of pronunciation, meaning, and word formation. Professional-level Korean speakers need to be able to read at least 1,800 Sino-Korean characters. Reinforcement of collocation patterns and semantic association of Sino-Korean vocabulary. P/NP or letter grading.

104A-104B-104C. Korean Writing for Advanced Learners. (4-4-4) Lecture, three hours; discussion, one hour. Enforced requisite: course 100C or Korean placement test. Emphasis on academic writing in Korean, including rhetorical conventions, argument construction and coherence, and development of prose style. Readings include representative examples of diverse genres: magazines, journals, Ko-rials, and books. Each course may be taken independently for credit. P/NP (undergraduates), SU (graduates), or letter grading.

105A. Korean Language in Translation: Modern. (4) Lecture, three hours; discussion, one hour. Requisite: English Composition 3 or 3H or one course from Comparative Literature 1A, 1B, 1C, 1D. Knowledge of Korean not required. Survey of modern and contemporary Korean literature. P/NP or letter grading.

105B. Korean Language in Translation: Contemporary. (4) Lecture, three hours; discussion, one hour; film viewing, three hours. Knowledge of Korean not required. Historical and critical survey of Korean cinema, examining intersection between 20th-century Korean history, politics, and filmmaking. P/NP or letter grading.


151. Korean Literature in Translation: Modern. (4) Lecture, three hours; discussion, one hour. Requisite: English Composition 3 or 3H or one course from Comparative Literature 1A, 1B, 1C, 1D. Knowledge of Korean not required. Survey of modern and contemporary Korean literature. P/NP or letter grading.

154. Introduction to Korean Cinema. (4) Lecture, two hours; discussion, one hour. Knowledge of Korean not required. Critical and historical examination of Korean cinema from its inception to present. P/NP or letter grading.

155. Topics in Korean Cinema. (4) Lecture, one hour; discussion, one hour; film viewing, three hours. Knowledge of Korean not required. Historical and critical survey of Korean cinema, examining intersection between 20th-century Korean history, politics, and filmmaking. P/NP or letter grading.


172. Topics in Korean Christianity. (4) Lecture, three hours; discussion, one hour. Knowledge of Korean not required. Historical development of Christianity in Korea, beliefs and practices, impact of Christianity on modern Korean culture and society. Coverage varies. May be repeated for credit with consent of instructor. Letter grading.

175. Introduction to Traditional Korean Thought. (4) Lecture, three hours; discussion, one hour. Knowledge of Korean not required. General survey of Korean thought from earliest records to 19th century, including shamanism, Taoism, Buddhism, Christianity, and neo-Confucianism. Korean thought and those found in India, China, Japan, and West. P/NP or letter grading.


177. Introduction to Modern Korean Thought. (4) Lecture, three hours; discussion, one hour. Knowledge of Korean not required. Survey of Korean thought in late 19th and 20th centuries, including religious thought, political thought, feminism, nationalism, and economic thinking and practice. P/NP or letter grading.


180A-180B-180C. Cultural History of Korea. (4-4-4) Lecture, three hours; discussion, one hour. Requisite: comparative literature 5 or knowledge of Korean not required. Examination of evolution of Korean culture and society within context of political and institutional industry. Consideration of both higher and popular culture. P/NP or letter grading. May be taken: Through 129A, 120B, 1290 through 1876; 180C. Since 1876.

181. Reading Korean Cultural Landscape. (4) Lecture, three hours; discussion, one hour. Knowledge of Korean not required. Introduction to Korean culture
Readings in Korean intellectual history and its social, political, and economic background from rise of neo-Confucianism in 14th century to 20th century. Letter grading.

211. Thought and Society in Modern Korea. (4) Discussion, three hours. Preparation: reading knowledge of Korean. Recommended. Discussion of selected topics in 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 1860 to annexation of Korea by Japan in 1910, introducing an interdisciplinary scholarship on political, diplomatic, social, economic, intellectual, and cultural history. Letter grading.

215. Korean Literary History. (4) Lecture, three hours. Designed for graduate students. Critical history of development of traditional Korean literature, with emphasis on canon and ideology, literary systems, hierarchy of genres, rise of literary kinds and forms, periodization, and critical issues in literary history. One particular focus to be nationalist canon that governs literary studies in Korea and West. Letter grading.

220. Structure of Korean. (4) Lecture, three hours; discussion, two hours. Critical reading and discussion of selected topics in Korean functional linguistics (grammaticalization, discourse, pragmatic, and semantic characteristics of Korean in light of linguistic universals, with brief introduction of modern Korean history, including such topics as Korean capitalism and communism, intellectual history, social movements, and Korean War. Letter grading.


230A-230B, 235A-235B. Seminars: Classical Korean Poetry. (4) Seminar, three hours; discussion, two hours. Critical reading and discussion of selected topics in Korean literature. Focus on development of traditional Korean literature, with emphasis on works of Korean literati. May be repeated for credit. Letter grading.


245A-245B. Seminars: Classical Korean Poetry. (4-4) Seminar, three hours. Preparation: reading knowledge of Korean. Critical reading and analysis of selected topics in classical Korean 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.


249B. Korean Buddhism. (4) Lecture, three hours; discussion, one hour. Knowledge of Korean not required. Examination of interactions between indigenous Korean culture and Sinitic traditions of Buddhism. Korean syntheses of imported Buddhist theologies and meditative techniques, and independent Son (Zen) schools of Korea. Concurrently scheduled with course C160. Letter grading.


284A-284B. Cultural History of Modern Korea. (4-4) Lecture, three hours; discussion, two hours. Preparation: knowledge of Korean. Critical reading and analysis of selected topics in modern Korean history. In Progress (284A) and letter (284B) grading.
Asian Languages and Cultures

South Asian

Lower Division Course

60. Religion in Classical India: Introduction. (5) Lecture, three hours; discussion, one hour. Introduction to religions of classical India — Ved, Brahmanical, Hindu, Jain, and Buddhism — paying equal attention to change and continuity, with emphasis on chronological development. P/NP or letter grading.

Upper Division Courses

101A. 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.


101C. Advanced Sanskrit. (4) Lecture, three hours. Requisite: course 110B. Reading of entire Bhagavadgita and/or comparable amount of other Sanskrit literature. P/NP or letter grading.

115. Readings in 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 Sanskrit language not required. Survey of some landmarks of classical Indian literature from the 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.


Southeast Asian

Lower Division Courses

M20. Visible Language: Study of Writing. (5) (Same as Asian M20, Indo-European Studies M20, Near Eastern Languages M20, and Slavic M20.) Lecture, three hours; discussion, one hour. Consideration of concrete means of language representation in writing systems. Early representations of language known are those of Near East dating to end of 4th millennium B.C.E. While literacies evolved in Israel, Egypt, Indus Valley, China, and Mesoamerica left little evidence of correspondence, developments, their antiquity and, in case of China and Mesoamerica, their evident isolation 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 semiotic language representation and development of early non-Western writing systems. How Greco-Roman alphabet arose in 1st millennium B.C.E. and how it compares to other modern writing systems. P/NP or letter grading.

50. Religious Traditions in Southeast Asia. (4) (Formerly numbered 30.) Lecture, three hours. Introduction to historical development and contemporary practice of religions in Southeast Asia. Examination of indigenous religious beliefs and major texts introduced to region, including Hinduism, Buddhism, Islam, and Christianity. P/NP or letter grading.

90. Modern Literatures in Southeast Asia. (4) Lecture, three hours. Knowledge of Southeast Asian languages not required. Exploration of diversity of Southeast Asian cultures as areas in cultural history, modernization, politics, and literature through modern literary texts. P/NP or letter grading.

Upper Division Courses

130. Topics in Southeast Asian Literature. (4) Lecture, three hours. Requisite: course from Comparative Literature 1A, 1B, 1C, 1D, 2AW, 2BW, 2CW, or English Composition 3 or 3H. Knowledge of Southeast Asian languages not required. Advanced exploration of Southeast Asia through reading of selected texts from region. Topics include censorship, politics, language, and literature. P/NP or letter grading.

135. Religion and Society in Southeast Asia. (4) Lecture, three hours; discussion, one hour. Critical issues related to major religious traditions in Southeast Asia, with emphasis on reading and reflecting on recent scholarship regarding complex interactions between religion, state, and society in contemporary Southeast Asia, P/NP or letter grading.

Graduate Courses

M222A-M222B. Vedic. (4-4) (Same as Iranian M222A-M222B.) Lecture, three hours. Preparation: knowledge of Sanskrit equivalent to course 110C. Characteristics of Vedic dialect and readings in Rig-Vedic hymns. Course M222B may be repeated for credit. S/U or letter grading.

140. Zomia: Peoples, Societies, and Cultures of Upland Southeast Asia. (4) Lecture, three hours; discussion, one hour. Recommended: prerequisite: prior course in Asian cultures or history. Multidisciplinary survey of peoples of upland Southeast Asia and critical issues affecting them. Topics include history, culture, human rights, ethnicity, religion, politics. 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 connect to social historical contexts nationally, regionally, or globally. May be repeated for credit. P/NP or letter grading.

170A-170B-170C. Topics in Southeast Asian Studies. (4-4-4) Lecture, three hours. Exploration of Southeast Asian culture through in-depth reading of texts and/or visual documents. Topics include literature, religion, folklore, cultural history, and society. P/NP or letter grading.

Thai

Lower Division Courses

1. Introductory Thai. (5) (Formerly numbered Southeast Asian 60A.) Lecture, five hours. Coverage of basic Thai grammar, with equal emphasis on reading, writing, conversation, and comprehension. P/NP or letter grading.

2. Introductory Thai. (5) (Formerly numbered Southeast Asian 60B.) 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) (Formerly numbered Southeast Asian 60C.) 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) (Formerly numbered Southeast Asian 60R.) 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) (Formerly numbered Southeast Asian 61A.) Lecture, five hours. Enforced requisite: course 3 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) (Formerly numbered Southeast Asian 61B.) Lecture, five hours. Recommended preparation: speak and listen Thai. 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.

6. Intermediate Thai. (5) (Formerly numbered Southeast Asian 61C.) 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-100C. Advanced Thail. (4-4-4) (Formerly numbered Southeast Asian 162A-162B-162C.) Lecture, three hours. Required: course 2 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. Reinforcement of basic grammar and vocabulary acquired at beginning and intermediate levels. Coverage of more advanced topics on various aspects of Thai society. Broadening of skills in conversation and composition. Reading of selected texts and authentic materials. P/NP or letter grading.

109. Advanced Tutorial Instruction in Thai. (2) Tutorial, two hours. Required: course 6 or Thai placement test. Tutorial and guided independent study to help students develop advanced to superior proficiency in oral and written Thai. May be repeated for credit. P/NP or letter grading.

**Vietnamese**

**Lower Division Courses**

1. Introductory Vietnamese. (5) (Formerly numbered Southeast Asian 50A.) Lecture, five hours. Coverage of basic Vietnamese grammar, with equal emphasis on reading, writing, conversation, and comprehension. P/NP or letter grading.

2. Introductory Vietnamese. (5) (Formerly numbered Southeast Asian 50B.) Lecture, five 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.

3. Introductory Vietnamese. (5) (Formerly numbered Southeast Asian 50C.) Lecture, five 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.

4. Intermediate Vietnamese. (5) (Formerly numbered Southeast Asian 51A.) Lecture, five 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) (Formerly numbered Southeast Asian 51B.) Lecture, five 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) (Formerly numbered Southeast Asian 51C.) Lecture, five 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 1, 2, and 3. Coverage of basic Vietnamese grammar, with equal emphasis on reading, writing, conversation, and comprehension. Offered in summer only. P/NP or letter grading.

**Upper Division Courses**

100A-100B-100C. Advanced Vietnamese. (4-4-4) (Formerly numbered Southeast Asian 152A-152B-152C.) 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.

109. Advanced Tutorial Instruction in Vietnamese. (2) Tutorial, two hours. Required: course 6 or Vietnamese placement test. Tutorial and guided independent study to help students develop advanced to superior proficiency in oral and written Vietnamese. May be repeated for credit. P/NP or letter grading.

M155. Topics in Vietnamese Cinema and/or Literature. (4) (Formerly numbered Southeast Asian M155.) (Same as Asian American Studies M173.) Lecture, three hours; discussion, one hour. Knowledge of Vietnamese not required. Critical and historical examination of literary and/or filmic representations connected to social practices such as empire, nation, diaspora, and globalization. Original language course materials available for interested students. P/NP or letter grading.

155FL. Readings in Vietnamese. (2) (Formerly numbered Southeast Asian 155FL.) Seminar, two hours. Required: course 3 or 3A. Enforced corequisite: course M155. Additional work in Vietnamese to augment work assigned in course M155, including reading, writing, and other exercises in Vietnamese. P/NP or letter grading.

180A. Vietnam: History and Civilization to 1858. (4) (Formerly numbered Southeast Asian 156A.) Lecture, three hours; discussion, one hour. Recommended preparation: at least one Asian history course. Exploration of Vietnamese society and culture from origins to early 19th century, with emphasis on exploration 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) (Formerly numbered Southeast Asian 156B.) 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.

**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.

**ASTRONOMY**

See Physics and Astronomy

**ATMOSPHERIC AND OCEANIC SCIENCES**

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James C. McWilliams, Ph.D. (Louis B. Slichter Professor of Geophysics and Planetary Physics)
Carlos R. Mechoso, Ph.D.
J. David Neelin, Ph.D.
Suzanne E. Paulson, Ph.D.
Bjorn B. Stevens, Ph.D.
Jochen P. Stutz, Ph.D.
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Richard P. Turco, Ph.D.
Yongkang Xue, Ph.D.

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Michael Ghil, Ph.D.
George L. Siscoe, Ph.D.

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Assistant Professors
Burkard G. Baschek, Ph.D.
Kristen L. Corbosiero, Ph.D.
Curtis A. Deutsch, Ph.D.
Qinbin Li, Ph.D.
Jonathan L. Mitchell, Ph.D.
Ulrike Seibt, Ph.D.
Aradhna K. Tripati, Ph.D.

Lecturer
Jeffrey K. Lew, Ph.D.

Adjunct Professors
Yi Chao, Ph.D.
Randall R. Friedl, Ph.D.
Duane E. Waliser, Ph.D.

Adjunct Assistant Professor
Annmarie Elderding, Ph.D.

Scope and Objectives

The atmospheric and oceanic sciences present a wide variety of problems of compelling scien-
tific interest and increasing social concern. This is exemplified by efforts to improve air quality, depletions caused by severe storms and floods, attempts to control or modify weather phenomena, problems of long-range weather forecasts, climate change, and predictions, and expanding scientific frontiers into our outer atmosphere and atmospheres of other planets.

The department 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 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.

### 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.

### Atmospheric and Oceanic Sciences

The Atmospheric and Oceanic Sciences offers Master of Science (M.S.), Candidate in Philosophy (C.Phil.), and Doctor of Philosophy (Ph.D.) degrees in Atmospheric and Oceanic Sciences.

### Lower Division Courses

1. **Climate Change: From Puzzles to Policy** — Laboratory. (1) Laboratory, one hour. Enforced corequisite: course 2. 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.

2. **Air Pollution.** (4) Lecture, three hours; discussion, one hour. Causes and effects of high concentrations of pollution in atmosphere. Topics include nature 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.

3. **Introduction to Atmospheric Environment.** (4) Lecture, three hours; discussion, one hour. Nature and causes of weather phenomena, including atmospheric circulation, clouds and storms, lightning and precipitation, fronts and cyclones, and tornados and hurricanes. Atmospheric radiation, global warming, and greenhouse effect. P/NP or letter grading.

4. **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 seaso

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 evolution 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.

M10. Introduction to Environmental Science. (Same as Environment M10.) 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.

88. Lecture. (Seminar, three hours. Variable topics; consult Schedule of Classes or department for topics to be offered in specific term. P/NP or letter grading.)

Upper Division Courses


130. California’s Ocean. (4) Lecture, four hours. Requisite: course 103 or 105. Circulation, biogeochemistry, biota, water quality, measurement techniques, computational modeling, conservation, and management for California’s coastal ocean, including coastal fields and term project (paper and presentation). Letter grading.

140. Environmental Chemistry Laboratory. (4) (Same as Chemistry M140.) Lecture, two hours; laboratory, three hours. Laboratory experience for students who wish to pursue career in environmental science. Essential laboratory procedures to be performed in context of timely environmental issues involving smog formation, acid rain, and ozone depletion. Hands-on experience using scientific instruments and analytical techniques appropriate for environmental assessment. P/NP or letter grading.

185. Atmospheric and Oceanic Sciences / 185

186. Operational Meteorology. (2) Lecture, three hours; discussion, one hour. Requisite: course C110. Limited to junior/senior Atmospheric, Oceanic, and Environmental Sciences majors. Daily contact with weather data and forecast. Introduction to weather forecasting for aviation, air pollution, marine weather, fire weather, and public use. Includes daily weather forecasts, field experiments, and programming. Letter grading.

194. Directed Research in Atmospheric and Oceanic Sciences. (2 to 4) Tutorial, to be arranged. Limited to juniors/senior Atmospheric and Oceanic Sciences majors. 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

200B. Introduction to Dynamics of Earth System. (4) Lecture, three hours. Overview of general circulation of atmosphere and global energy balance; coupled circulations (such as El Niño); mesoscale, synoptic, and tropical phenomena; boundary layers, clouds, and convection; biogeochemical cycles; climate variability and change. Letter grading.


201C. Atmospheric and Oceanic Turbulence. (4) Lecture, three hours. 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 column stratification. Letter grading.


M203A. Introduction to Atmospheric Chemistry. (4) (Same as Civil Engineering M262A.) Lecture, three hours. Requisites for undergraduates: Chemistry 20B. Principles of atmospheric chemistry: chemical composition and history of Earth’s atmosphere; biogeochemical cycles of key atmospheric constituents; basic photochemistry of the 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. Introduction to basic processes (including those of radiation, heat budget, and water budget) 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 advection; precipitation processes; radiative forcings of clouds/aerosols and climate feedback. Letter grading.

C205A. Introduction to Solar System Plasmas. (4) Lecture, three hours; discussion, one hour. Introduction to basic processes (including those of radiation, heat budget, and water budget) 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 advection; precipitation processes; radiative forcings of clouds/aerosols and climate feedback. Letter grading.

205B. Introduction to Solar-Terrestrial Physics. (4) Lecture, three hours; discussion, one hour. Solar, interplanetary, magnetospheric, ionospheric, auroral, geomagnetic phenomena, and geomagnetic field and its origin. Letter grading.

205C. Planetary Upper Atmospheres. (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; circulation, ionospheres, chemistry of as collisional and magnetized (unmagnetized) plasmas: currents, drifts, and instabilities. Examples of upper atmosphere interaction with lower atmosphere and magnetosphere. Examination of relationships between turbulence and its transport effects on general circulations. 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.

M210C. Introduction to Land Surface Processes and Land/Air Interactions. (4) (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 various canopy model, radiation, heat and CO2, fluxes transfer, and satellite data application. Laboratory sessions included. S/U or letter grading.

Dynamic and Synoptic Meteorology


211. Planetary Wave Dynamics and Teleconnections in Atmosphere/Ocean. (4) Lecture, three hours. Requisite: course 201B. Dynamics of stationary and low-frequency waves in Earth's atmosphere and ocean with applications to remote impacts of climate variability. Propagation of barotropic and baroclinic Rossby waves in spatially varying flow. Interactions with storm tracks and mean flow. 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.

212A. Numerical Modeling of Planetary Fluid Dynamics. (4) Lecture, three hours. Requisite or corequisite: course 201A. Basic numerical methods for boundary value problems in fluid dynamics, with emphasis on application to atmospheric and oceanographic problems. Finite-difference methods and truncation error. Linear and nonlinear computational instability. Computational modes and computational boundary conditions. Nonlinear shallow-water equation model. Spectral methods. 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.


214. Theoretical Climatic Dynamics. (4) Lecture, three hours. Radiative transfer and energy-budget models (EBMs). Multiple equilibrium climates and their stability. Coupled EBMs of atmosphere and oceans. Climatic history of our planet. Continuum mechanics of glaciers and ice sheets and mantle. Oscillatory models of Quaternary glaciation cycles. Transitions from equilibrium to periodic and aperiodic climate behavior. Climatic predictions. 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.

215A. Motion. (4) Lecture, three hours. Requisites: courses 200A, 201A. Phenomena, theory, and modeling of ocean circulations with global to regional scope. Circulation 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.

215B. Tropical Motions with Moist Processes. (4) Lecture, three hours. Requisites: courses 200A, 201A. Cumulus convection and the boundary layer in tropics. Cloud clusters and mesoscale convection systems. Interaction of cumulus convection with large-scale environmental planetary 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.


221. Dynamics of Atmosphere/Ocean System. (4) Lecture, three hours. Transfer of properties between atmosphere and ocean; wind-driven ocean currents; coastal upwelling. Air/sea interactions. Effects of oceanic 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.


221. Geophysical Turbulence. (4) Lecture, three hours. Requisites: courses 200A, 201A. Phenomena, theory, and modeling of ocean circulations with global to regional scope. Circulation 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.
224A. Atmospheric Turbulence. (4) Lecture, three hours. Kinematics of homogeneous and shear flow turbulence; atmospheric boundary layers, including heat transfer and turbulent convection. Survey of field and laboratory observations and their interpretation by theory. 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.

234B. Cloud and Precipitation Physics II. (4) Lecture, three hours. Requisite: course 234A. Theory of growth and evaporation of water drops and ice crystals by diffusion of water vapor; hydrodynamics of rigid bodies in viscous medium; hydrodynamics of cloud drops, rain drops, and atmospheric ice particles; growth of cloud drops and atmospheric ice particles by collision. 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.

234C. Atmosphere and Ocean Interactions. (4) Lecture, three hours. Requisite: course 234B. Tropical, midlatitude, and polar climates; large-scale circulation; interaction of atmospheric and oceanic general circulation; tropical precipitation. S/U or letter grading.

237. Climate and Climate Change. (4) Lecture, three hours. Requisite: course 234B. Introduction to climate. Basic concepts of climate and climate change; climate models; climate change detection and attribution; climate change projection and implications. S/U or letter grading.

238. Environmental Fluid Dynamics. (4) Lecture, three hours. Requisite: course 234B. Dynamics of sea ice and glaciers; atmospheric boundary layer; turbulence; application to aerosol transport. 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

272. Seminar: Atmospheric Sciences. (2) Seminar, one hour. May be repeated for credit. S/U or letter grading.

273. Seminar: Atmospheric Dynamics. (2) Seminar, one hour. May be repeated for credit. S/U or letter grading.


273. Seminar: Atmospheric Politics. (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 sciences, including physical oceanography, biogeochemistry, marine biology, coastal engineering, atmospheric processes, and health-related issues. May be repeated for credit. S/U 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.

283. Special Topics in Atmospheric Physics. (2 to 4) Lecture, two hours. Individual meetings with instructor to be arranged. May be repeated for credit. S/U or letter grading.

284. Special Topics in Atmospheric Chemistry. (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. Selected topics of current research interest in solar wind, magnetospheric, or ionospheric physics. S/U or letter grading.

296A-296L. Advanced Topics in Atmospheric Sciences. (2 each) Discussion, two hours. Advanced study and analysis of current topics in atmospheric sciences. Discussion of current research and literature in research specialty of faculty member teaching course. May be repeated for credit. S/U grading:

296A. Numerical Modeling of Atmosphere.
296B. Boundary Layers, Clouds, and Climate.
296C. Numerical Mesoscale Modeling.
296D. Climate Dynamics.
296E. Numerical Modeling of Atmosphere and Ocean.
296F. Hierarchical Modeling of Ocean/Atmosphere System.
296G. Upper Atmosphere and Space Physics.
296H. Recent Advances in Atmospheric Chemistry.
296I. Upper Atmospheric Dynamics.
296J. Experimental Mesoscale Meteorology.
296K. Tropical Meteorology.
296L. Geophysical Fluid Dynamics, Oceanography, and Climate.
296M. Radiation and Remote Sensing.
296N. Tropospheric Chemistry and Climate Modeling and Analysis.
296P. Atmospheric Chemistry of Air Pollution, Aerosols, and Climate.

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 Atmospheric and Oceanic Sciences. (2) Seminar, one hour; two-day intensive training session prior to Fall Quarter. Required of all new teaching assistants and recommended for new Ph.D. students and graduate students intending to be teaching assistants during academic year. Introduction to classroom teaching for general education and upper-division departmental courses. Topics include pedagogical techniques, preparation, academic integrity, and integration of technology and electronic communications. S/U grading.


## BIOENGINEERING

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Benjamin M. Wu, D.D.S., Ph.D., Chair
Daniel T. Kamei, Ph.D., Vice Chair

**Professors**

Denise Aberle, M.D.
Mark S. Cohen, Ph.D., in Residence
Timothy J. Deming, Ph.D.
Warren S. Grundfest, M.D., FACS
Chih-Ming Ho, Ph.D. (Ben Rich Lockheed Martin Professor of Aeronautics)
Gerard C.L. Wong, Ph.D.

Benjamin M. Wu, D.D.S., Ph.D.

**Professors Emeriti**

Hooshang Kangarloo, Ph.D.
Edward E.R. McCabe, M.D., Ph.D. (Mattel Executive Endowed Professor Emeritus of Pediatrics)

**Associate Professors**

James Dunn, M.D., Ph.D.
Daniel T. Kamei, Ph.D.
Jacob J. Schmidt, Ph.D.

**Assistant Professors**

Dino DiCarlo, Ph.D.
Andrea M. Kasko, Ph.D.

**Adjunct Assistant Professors**

Kayvan Niazi, Ph.D.
Shahrooz Rabizadeh, Ph.D.
Bill J. Tawil, M.B.A., Ph.D.

## Scope and Objectives

Faculty members in the Department of Bioengineering believe that the interface between biology and the physical sciences represents an exciting area for science in the twenty-first century. Bioengineering has established itself as an independent field and engineering discipline, resulting in the formation of many new bioengineering departments and the redefinition of established programs. Faculty members have embraced this unique opportunity by developing an innovative curriculum, creating state-of-the-art facilities, and performing cutting-edge research.

Instead of treating bioengineering as an application of traditional engineering, it is taught as an applied science discipline in its own right. The bioengineering program is a structured compilation of unique forward-looking courses dedicated to producing graduates who are well-grounded in the fundamental sciences and highly proficient in rigorous analytical engineering tools necessary for lifelong success in the wide range of possible bioengineering careers. The program provides a unique engineering educational experience that responds to the growing needs and demands of bioengineering.

## Undergraduate Study

The Bioengineering major is a designated capstone major. Utilizing knowledge from previous courses and new techniques 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 final projects in written and oral format, and team competition.

## Bioengineering B.S.

### Capstone Major

**Preparation for the Major**

**Required:** Bioengineering 10; Chemistry and Biochemistry 20A, 20B, 20L, 30A, 30AL, 30B, 30BL; Computer Science 31; Life Sciences 2 (satisfies HSSEAS GE life sciences requirement), 3, 4; Mathematics 31A, 31B, 32A, 32B, 33A, 33B; Physics 1A, 1B, 1C, 4AL, 4BL.

**The Major**

**Required:** Bioengineering 100, M106, 110, 120, 165EW (or Engineering 183EW or 185EW), 176, 180, Chemistry and Biochemistry 153A, Electrical Engineering 100; three technical breadth courses (12 units) selected from an approved list available in the Office of Academic and Student Affairs; three capstone design courses (Bioengineering 167L, 177A, 177B); and three major field elective courses (12 units) from Bioengineering M104, M105, M131, 130L, 181L, 199 (6 units maximum), Biomedical Engineering C101, CM102, CM103, CM140, CM145, C147, CM150, CM150L, C170, C171, CM180, C181, CM183, C185, CM186, CM187.

The three technical breadth and three major field elective 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:

**Biomedical Devices:** Bioengineering M131, 199 (8 units maximum), Biomedical Engineering
Bioengineering

Lower Division Course

10. Introduction to Bioengineering. (3) Lecture, two hours; discussion, one hour; outside study, three hours. Preparation: high school biology, chemistry, mathematics, physics. Introduction to scientific and technical bases for established and emerging subfields of bioengineering, including biosensors, bioinstrumentation, and biosignal processing, biomechanics, biomaterials, tissue engineering, biotechnology, biological imaging, biomedical optics and lasers, neuroengineering, 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 1B. 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.

M104. Physical Chemistry of Biomacromolecules. (4) (Same as Biomedical Engineering CM104.) Lecture, three hours; discussion, two hours; outside study, seven hours. Requisites: Chemistry 20A, 20B, 30A, Life Sciences 2, 3, 4. To understand their physical chemistry. Biomacromolecules and design synthetic replacements, it is imperative to understand their physical chemistry. Biomacromolecules such as protein or DNA can be analyzed and characterized by applying fundamentals of polymer physics and chemistry. Application of polymer structure and conformation, bulk and solution thermodynamics and phase behavior, polymer networks, and viscoelasticity. Application of engineering principles to problems involving biomacromolecules such as protein conformation, solvation of charged species, and separation and characterization of biomacromolecules. Letter grading.

M105. Polymers Chemistry and Bioconjugates. (4) (Same as Biomedical Engineering CM105.) 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 biomolecules for wide range of applications. Oligonucleotides may be coupled to one surface in gene chip, or one protein may be coupled to one polymer to enhance its stability in serum. Wide variety of bioconjugates are used in delivery of pharmaceuticals, in sensors, in medical diagnostics, and in tissue engineering. Basic knowledge of covalent and noncovalent conjugation between molecules is necessary to understand conjugate linkers depending on type of biomolecule and desired application, such as degradable versus nondegradable linkers. Presentation and discussion of design and synthesis of synthetic bioconjugates for some sample applications. Letter grading.

106. Topics in Biophysics, Channels, and Membranes. (4) (Same as Biomedical Engineering CM106.) Lecture, 2, six hours; outside study, eight hours. Requisites: Chemistry 20B, Life Sciences 2, 3, 4, Mathematics 33B, Physics 1C, 4AL, 4BL. Coverage in depth of physical processes associated with ions and channel proteins, with specific emphasis on electrophysiology. Basic physical principles governing electrostatics in electric media, building on complexity to ultimately address action potentials and signal propagation in nerves. Topics include Nernst/Planck and Poisson Boltzmann equations, Nernst potential, Donnan equilibrium, GHK equations, energy barriers in ion channels, carrier equation, action potentials, Hodgkin-Huxley equations, impulse propagation, axon geometry and conduction, dendritic integration. Letter grading.

M107. Polymer Chemistry for Bioengineers. (4) (Same as Biomedical Engineering CM107.) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisite: course M104 or M105. Fundamental concepts of polymer synthesis, including step-growth, chain-growth, and living polymerization, opening, with focus on factors that can be used to control chain length, chain length distribution, and chain-end functionality, chain copolymerization, and stereocompact polymerization in presentation of applications of use of different polymerization techniques. Concepts of step-growth, chain-growth, ring-opening, and coordination polymerization, and effects of syntheses on polymer properties. Emphasis on both theory and practical issues demonstrated through examples. Letter grading.

110. Biotransport and Bioreaction Processes. (4) (Same as Biomedical Engineering CM110.) Lecture, four hours; discussion, one hour; outside study, seven hours. Enforced requisites: course 100, Mathematics 33B. Introduction to analysis of fluid flow, heat transfer, mass transfer, binding events, and biochemical reactions in systems, interest to bioengineers, including cells, tissues, organs, human body, extracorporeal devices, tissue engineering systems, and bioartificial organs. Introduction to pharmacochemical analysis. Letter grading.


M131. Nanopore Sensing. (4) (Same as Biomedical Engineering CM131.) 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 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 issues, protein engineering, molecular sensing, DNA sequencing, membrane engineering, and future directions of field. Letter grading.

165EW. Bioengineering Ethics. (4) (Formerly numbered 165.) Lecture, four hours; discussion, three hours; outside study, five hours. All professions have well-established discipline that addresses ethical problems about producing devices from molecules to bridging gaps between medicine and biology. Sourcing and ordering of materials and supplies relevant to student projects. Explorations of different ethical and computational methods. Scientific presentation of progress. Letter grading.

177B. Bioengineering Capstone Design II. (4) (Formerly numbered 182B.) Lecture, two hours; laboratory, six hours; outside study, four hours. Enforced requisites: courses 167L, 176. Lectures, seminars, and discussions on aspects of biomedical device and therapeutic design, including meetings with scientific/clinical advisers and guest lecturers from industry. Working in teams, students design engineering solutions to problems in medicine and biology. 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 4BL. Corequisite: course 180L. Part I of two-part seminar featuring the latest advances in computational biology, bioengineering, and engineering design principles of cardio-vascular and pulmonary systems. Fundamental engineering principles of selected medical therapeutic devices. Letter grading.

180L. System Integration in Biology, Engineering, and Medicine I Laboratory. (3) Lecture, one hour; laboratory, four hours; clinical visits, three hours; outside study, one hour. Corequisite: course 180. Hands-on
on experimentation and clinical applications of selected medical therapeutic devices associated with cardiovascular and vascular areas. Letter grading.

181. System Integration in Biology, Engineering, and Medicine II. (4) Lecture, three hours; discussion, two hours; outside study, seven hours. Requisite: course 180L. Corequisite: course 181L. Part II of a two-part series. Molecular basis of normal physiology and pathophysiology of selected organ systems; engineering design principles of digestive and urinary systems. Fundamental engineering principles of selected medical therapeutic devices. Letter grading.

181L. System Integration in Biology, Engineering, and Medicine II Laboratory. (3) Lecture, one hour; laboratory, four hours; clinical visits, three hours; outside study, one hour. Corequisite: course 181. Hands-on experimentation and clinical applications of molecular basis of normal physiology and pathophysiology of selected organ systems; engineering design principles of digestive and urinary systems. Letter grading.

M183. Targeted Drug Delivery and Controlled Drug Release. (4) (Same as Biomedical Engineering CM183.) Lecture, three hours; discussion, two hours; outside study, seven hours. Requisites: Chemistry 202A, 202B, 203A. New therapeutics require comprehensive understanding of modern biology, physiology, biomaterials, and engineering. Targeted delivery of genes and drugs and their controlled release are important in treatment of challenging diseases and relevant to tissue engineering and regenerative medicine. Drug pharmacodynamics and clinical pharmacokinetics. Application of engineering principles (diffusion, transport, kinetics) to problems in 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. Introduction to biomaterials with specialized structural and interfacial properties. Exploration of both chemistry of materials and physical presentation of devices and compounds used in delivery and release. Letter grading.

188. Special Courses in Bioengineering. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Special topics in bioengineering 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. Letter grading.

194. Research Group Seminars: Bioengineering. (4) Seminar; three hours. Limited to bioengineering undergraduate students who are part of research group. Study and analysis of current topics in bioengineering. 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 school approval. Individual contract required; enrollment petitions available in Office of Academic and Student Affairs. Letter grading.

Faculty Committee
Eleazar Eskin, Ph.D. (Computer Science)
Christopher J. Lee, Ph.D. (Chemistry and Biochemistry)
Matteo Pellegrini, Ph.D. (Molecular, Cell, and Developmental Biology)
Qing Zhou, Ph.D. (Statistics)

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 connection 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, http://www.gdnet.ucla.edu/gasaa/library/pgmrqintro.htm. 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 (M.S.) and Doctor of Philosophy (Ph.D.) degrees in Bioinformatics.

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.

Graduate Courses

M202. Bioinformatics Interdisciplinary Research Seminar. (4) (Same as Chemistry M202.) Seminar, two hours; discussion, two hours. Concrete examples of how biological questions about genomics data map to and are solved by methodologies from other disciplines, including statistics, computer science, and mathematics. May be repeated for credit. 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 student development 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 M260A.) Lecture, three hours; discussion, one hour. Enforced requisites: Biostatistics 100A or 110A or Mathematics 170A or Statistics 100A or 110A, and Computer Science 180 or Programming in Computing 60 with grade of C– or better. Introduction to bioinformatics and methodologies, with emphasis on concepts and inventing new bioinformatics methods. Focus on sequence analysis and alignment algorithms. S/U or letter grading.

M271. Statistical Methods in Computational Biology. (4) (Same as Biostatistics M271 and Statistics M271.) Lecture, three hours; discussion, one hour. Preparation: elementary 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.

598. M.S. Thesis Research and Writing. (2 to 12) Tutorial, to be arranged. May be repeated for credit. S/U grading.

598. M.S. Thesis Research and Writing. (2 to 12) Tutorial, to be arranged. May be repeated for credit. S/U grading.

599. Ph.D. Dissertation Research and Writing. (2 to 12) Tutorial, to be arranged. May be repeated for credit. S/U grading.

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Kelsey C. Martin, M.D., Ph.D., Chair
The biological chemistry graduate program prepares students for careers as independent research scientists and scholars. Laboratory research in the department 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 Ph.D., but candidates for the M.S. 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, http://www.gdnet.ucla.edu/gasaa/library/pgmrqintro.htm. 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 (M.S.) and Doctor of Philosophy (Ph.D.) degrees in Biological Chemistry.

Biological Chemistry
Upper Division Courses
M140. Cell Biology: Cell Cycle. (5) Same as Molecular, Cell, and Developmental Biology M140. Lecture, four hours; discussion, one hour. Requisites: Chemis- try 1A, 1B, and 14B, or 20A, 20B, and 20L, Life Sciences 3, 4. Not open to credit for students with credit for Molecular, Cell, and Developmental Biology 110, 165A, or 165B. Satisfies premedical requirements. Eukaryotic cellular structures and biogenesis at the molecular level. Biochemical and genetic analysis of the cell cycle, signal transduction, and their involvement in development and cancer. Protein sorting and transport across cell membranes. Cytoskeletal components and cell-adhesion. Letter grading.


194. Research Group Seminars: Biological Chemistry. (2) Seminar, two hours. Designed for undergrad- uate students who are part of research group. Discussion of research methods and current literature in field or research of faculty members or students. May be repeated for credit. P/NP grading.

199. Directed Research or Senior Project in Biolog- ical Chemistry. (2 to 8) Tutorial, two hours. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Culmini- nating paper required. May be repeated for maximum of 16 units. Individual contract required. P/NP or letter grading.

Graduate Courses
201A-201B. Biological Chemistry. (5-6) Lecture, five hours. Preparation: organic chemistry. Open to non- medical students with consent of instructor. Principles for first-year medical students and runs throughout School of Medicine's second semester. General bio- chemistry 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 non- medical students with consent of instructor. Experi- ments illustrating techniques and procedures in medi- cally related biochemistry and nutrition, analysis of ex- perimental 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 projects 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 advisor. S/U grading.

M223. Membrane Molecular Biology. (4) Same as Physiology M223. Lecture, two hours; discussion, two hours. Preparation: course CM253. Advanced course in molecular aspects of membrane physiology and biochemistry covering lipids and physical chemistry of bio- molecular membranes; membrane biogenesis and target- ing of proteins to membranes; pumps, carriers, and channels; receptors and transmembrane signaling. S/U or letter grading.

M234. Genetic Control of Development. (4) Same as Molecular, Cell, and Developmental Biology M234. Lecture, four hours. Topics at forefront of molecular de- velopmental biology, including problems in oogenesis and early embryogenesis, pattern formation, axis de- termination, nervous system development, cellular morphogenesis, and cell-cell and cell-matrix interac- tions. S/U or letter grading.

M237. Cellular and Molecular Basis of Disease. (4) Same as Pathology M237. Lecture, two hours; labo- ratory, two hours. Preparation: one course each in mole- cular 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 ques- tions still remaining unanswered. Letter grading.

251A-251B-251C. Seminars: Transcriptional Regu- lation. (2-2-2) Seminar, two hours. Advanced courses on mechanisms of transcription in both eukaryotes and prokaryotes intended for students actively working or highly interested in transcription. S/U grading.

254A-254D. Concepts in Molecular Biocycles. (3 each) Lecture, three hours; discussion, two hours. Lecture grading.

254A. (3) Lecture, three hours; discussion, two hours. Five-week course covering four basic experimental ap- proaches of biochemistry and molecular biology in context of various specific topics, including (1) structur- al 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 reac- tions/pathways in cells, and (4) enzymology and pro- tein chemistry. Letter grading.

254B. (3) Five-week course. Lecture, three hours; dis- cussion, two hours. Enforced requisite: course 254A. Important biochemical problems that have been geneti- cally analyzed in different organisms or small number of related problems. Major genetic approaches used in relevant organisms, including both forward and reverse genetic approaches, genetic interactions between genes (genetic enhancers and suppressors), transgenic technology, and systematic genomic strategies. Letter grading.

254C. (3) Five-week course. Lecture, three hours; dis- cussion, two hours. Enforced requisites: courses 254A, 254B. Molecular mechanisms underlying complex problems in cell biology. Experimental approaches used to define mechanisms involved in protein target- ing, cell structure and subcellular organization, cell structure 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.
communication, and intracellular signaling. Analysis of pathways that connect these cellular processes. Letter grading.

254D. (3) Five-week course. Lecture, three hours; discussion, two hours. Enforced requisites: courses 254A, 254B, 254C. 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.


BIOLOGY
See Ecology and Evolutionary Biology

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Robert M. Elashoff, Ph.D., Vice Chair
Janet S. Sinshheimer, Ph.D., Vice Chair

Graduate Degrees
The Department of Biomathematics offers Master of Science (M.S.) and Doctor of Philosophy (Ph.D.) degrees in Biomathematics and the Master of Science (M.S.) degree in Clinical Research.

Biomathematics
Upper Division Courses

106. Introduction to Cellular Modeling. (4) Lecture, four hours; computer laboratory, two hours. Preparations: some computer programming. Requisites: Mathematics 32A. Designed for upper division science majors and biomedical graduate students. Introduction to modeling cells and cell systems, including intracellular biochemical networks, applications to cancer research. High-performance 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. Preparations: some computer programming. Requisites: Mathematics 32A. Designed for upper division science majors and biomedical graduate students. Survey of a wide variety of topics in neurobiological modeling, current research in modeling systems. Development of skills to formulate and program one's own studies using IMSL mathematics subroutines. P/NP or letter grading.


110. Elements of Biomathematics. (4) Lecture, three hours; laboratory, three hours. Preparation: calculus. Analysis of deterministic models. Conditions under which deterministic and probabilistic descriptions of biological phenomena are appropriate. Both approaches applied to selected examples in physiology and biology. P/NP or letter grading.

160. Introductory Biomathematics for Medical and Biological Research. (4) Lecture, four hours; discussion, nine 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, basic experimental design, sample size determination, article interpretation. P/NP or letter grading.

170A. Introductory Biomathematics for Medical Investigators. (4) Lecture, three hours; discussion, one hour. Intensive elementary statistics course emphasizing design and applications to observational studies and experiments. Clinical trials. Statistical topics include study design, descriptive statistics, elementary probability and distributions, confidence intervals and hypothesis testing, sample size and power, 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, nonlinear regression, 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.
171. Applied Regression Analysis in Medical Sciences. (4) Lecture, three hours; laboratory, one hour. Prerequisite: MATH 207A. Proficiency in applied regression analysis, with focus on interpretation of results and performing computer. Primary topics include simple linear regression, multiple regression, regression analysis of variance, logistic regression, and survival analysis. 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 total of 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. Assignment and requirements to be arranged. May be repeated for credit. Individual contract required. P/NP or letter grading.

198. Directed Research or Senior Project in Biomathematics. (2 to 8) Tutorial, to be arranged. Supervised research under guidance of faculty mentor. Culminating paper required. May be repeated for credit. Individual contract required. P/NP or letter grading.

Graduate Courses


201. Deterministic Models in Biology. (4) Lecture, three hours; laboratory, three hours. Preparation: knowledge of linear algebra and differential equations. Examination of the types of deterministic models under which some 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.


M203. Stochastic Models in Biology. (4) (Same as Biostatistics M231.) Lecture, four hours. Prerequisite: Mathematics 170A or equivalent experience in probability. Mathematical description of biological relationships, with particular attention to areas where conditions of the approach are taken to be determinism. Examination of and biological examples of stochastic models from genetics, physiology, ecology, and variety of other biological and medical disciplines. S/U or letter grading.

204. Biomedical Data Analysis. (4) Lecture, four hours. Quantity and quality of observations have been greatly affected by present-day extensive use of computers. Problem-oriented study of latest methods in statistical data analysis and use of such arising in laboratory and clinical research. S/U or letter grading.


M207A. Theoretical Genetic Modeling. (4) (Same as Biostatistics M237 and Human Genetics M207A.) Lecture, three hours; discussion, one hour. Requisite: Mathematics 115A, 131A, Statistics 100B. Mathematical models in statistical genetics. Topics include population genetics, genetic epidemiology, gene mapping, design of genetics experiments, DNA sequence analysis, and molecular phylogeny. S/U or letter grading.

M207B. Applied Genetic Modeling. (4) (Same as Biostatistics M237 and Human Genetics M207B.) Lecture, three hours; laboratory, one hour. Requisites: Biostatistics 110A, 110B. Methods of computer-aided human genetic analysis. Topics include statistical methodology underlying genetic analysis of both qualitative and quantitative complex traits. Laboratory for hands-on 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.

208A. Modeling in Neurobiology for Mathematicians. (4) Lecture, four hours; laboratory, two hours. Preparation: introductory ordinary partial differential equations, programming experience. Introduction to electrochemical bases for nerve function and mathematical and computational methods for studying this, appropriate for physicists, engineers, and mathematicians. Survey of current leading research areas and software systems. S/U or letter grading.

208B. Modeling in Neurobiology for Biologists. (4) Lecture, four hours; laboratory, two hours. Preparation: lower division calculus, some elementary programming experience. Introduction to topics including how to formulate models and study them with existing computer software (e.g., NODUS) or one’s own simple programs that use IMSL subroutines. Survey of current leading research areas and letter grading.


M211. Mathematical and Statistical Phylogenetics. (4) (Same as Biostatistics M211.) Lecture, three hours; laboratory, one hour. Requisites: Biostatistics 110A, 110B, Mathematics 170A. Phylogenetic tree reconstruction, with focus on phylogenetic techniques. Topics include evolutionary tree reconstruction methods, studies of viral evolution, phylogeny, and coalescent approaches. Applications to epidemiology 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 dynamics and self-organization in temporal and spatial systems. Dynamics in proteins and 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, glycocalyx 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.

213. Modeling Vascular Networks. (4) Lecture, four hours. Preparation: prerequisite mathematics, partial differential equations, complex analysis, elementary knowledge of partial differential equations. Introduction to equations that describe fluid dynamics and brain blood flow. Students will design computer programs to provide survey of models for structure and flow of vascular systems. Vascular systems are nearly ubiquitous in nature, occurring across animals, plants, and other organisms. Coverage of applications to tumor growth and angiogenesis, sleep, automated scaling, and other phenomena. S/U or letter grading.


M230. Computed Topography: Theory and Applications. (4) (Same as Biostatistics M230.) Lecture, four hours. Computed tomography is three-dimensional imaging technique being widely used in radiology and is becoming active research area in biomedical science. 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.

M231. Statistical Methods for Categorical Data. (4) (Same as Biostatistics M231.) Lecture, three hours; discussion, one hour. Requisites: Biostatistics 100B or 110B. Statistical techniques for analyzing categorical data; introduction of stochastic models and applications of their underlying theory. S/U or letter grading.

M232. Statistical Analysis of Incomplete Data. (4) (Same as Biostatistics M232.) Lecture, three hours; discussion, one hour. Requisite: Statistics 100B. Discussion of statistical analysis of incomplete data sets, with material from sample survey, econometric, biometric, psychometric, and general statistical literature. Topics include treatment of missing data in statistical packages, missing data in the main area of regression imputation, weighting, likelihood-based methods, and nonrandom nonresponse models. Emphasis on application of methods to applied problems, as well as on underlying theory. S/U or letter grading.

M234. Applied Bayesian Inference. (4) (Same as Biostatistics M234.) Lecture, three hours; discussion, one hour. Requisites: Biostatistics 100C, 200A. Bayesian approach to statistical inference, with emphasis on biomedical applications and concepts rather than mathematical theory. Topics include large sample Bayes inference from likelihood, 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.


258. Introduction to Clinical Trials. (2) Lecture, two hours. Requisites: courses 170A, 171. Limited to M.S. in Clinical Research students. Introduction to basic principles of good clinical trial design, trial implementation, and analysis. Letter grading.

259. Controversies in Clinical Trials. (2) Lecture, one hour; discussion, one hour. Preparation: completion of Introduction to Clinical Research students. Discussion of principles and practices of major disciplines underlying clinical research methodology, such as biostatistics, epidemiology, pharmacokinetics. S/U or letter grading.


Biomathematics / 193
Biomedical Engineering

Interdepartmental Program
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Mark S. Cohen, Ph.D. (Neurology, Psychiatry and Behavioral Sciences, Radiological Sciences)
Timothy J. Deming, Ph.D. (Bioengineering, Chemistry and Biochemistry)
Joseph J. DiStefano III, Ph.D. (Computer Science)
James Dunn, M.D., Ph.D. (Bioengineering, Pediatric Surgery)
Chih-Ming Ho, Ph.D. (Mechanical and Aerospace Engineering)
Jack W. Judy, Ph.D. (Electrical Engineering)
Karen M. Lyons, Ph.D. (Molecular, Cell, and Developmental Biology, Orthopaedic Surgery)
Edward R.B. McCabe, M.D., Ph.D. (Human Genetics, Pediatrics)
Ren Sun, Ph.D. (Molecular and Medical Pharmacology)
Michael A. Tellefsen, M.D., Ph.D. (Pathology and Laboratory Medicine)
Benjamin M. Wu, D.D.S., Ph.D. (Bioengineering, Materials Science and Engineering)

Scope and Objectives

The Biomedical Engineering Interdepartmental Program focuses on further expanding on the knowledge base of the entering scientists and engineers to enable them to become leaders in the rapidly growing field of biomedical engineering. Since biomedical engineering encompasses many fields, the curricula have been tailored to include courses that cover the appropriate core body of knowledge in the respective fields, as well as electives that build on this knowledge.

In addition to the courses, thesis research provides invaluable training in solving open-ended problems and education in specific areas to allow specialization. Fostering careers in industry, academia, or government laboratories, the program offers M.S. and Ph.D. degrees in Biomedical Engineering. Several faculty members with principal appointments in departments across campus who participate in biomedical engineering research accept graduate students into their state-of-the-art laboratories.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://www.gdnet.ucla.edu/gasas/library/pgmrqintro.htm. In many cases, more detailed guidelines may be outlined in an-
nouncements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees
The Biomedical Engineering Program offers Master of Science (M.S.) and Doctor of Philosophy (Ph.D.) degrees in Biomedical Engineering.

Biomedical Engineering

Upper Division Courses

C101. Introduction to Biomedical Engineering. (4) Lecture, three hours; laboratory, three hours; outside study, six hours. Designed for physical sciences, life sciences, and engineering students. Introduction to wide scope of biomedical engineering via treatment of selected important individual topics by small team of specialists. Concurrently scheduled with course C201. Letter grading.

C102. Basic Human Biology for Biomedical Engineering. (4) (Same as Physiology Science CM102.) Lecture, three hours; laboratory, two hours. Preparation: human molecular biology, biochemistry, and cell biology. Focus on methodology 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 and cellular perspectives of human body. Concurrently scheduled with course CM203. Letter grading.


C104. Physical Chemistry of Biomacromolecules. (4) (Same as Chemical Engineering M104.) Lecture, three hours; discussion, two hours; outside study, seven hours. Requisites: Chemistries 20A, 20B, 30A, Life Sciences 2, 3. Physical chemistry principles, concepts of polymer synthesis, including step-growth, chain-growth, ring-opening, and coordination polymerization, and effects of synthesis procedures on physicochemical properties of polymers. Focus on polymerization techniques and the application of polymer knowledge to human biology. Concurrently scheduled with course CM203. Letter grading.

C105. Biopolymer Chemistry and Bioconjugates. (4) (Same as Bioengineering M105.) Lecture, four hours; discussion, one hour; outside study, seven hours. Enforced requisites: Chemistries 20A, 20B, 20L. Highly recommended: one organic chemistry course. Bioconjugate chemistry is science of coupling biomacromolecules for wide range of applications. Oligonucleotides may be coupled to one surface in gene chip, or one protein may be coupled to one polymer to enhance its stability in serum. Wide variety of bioconjugates are used in delivery of pharmaceuticals, in sensors, in medical devices. A variety of advanced topics and applications. Concurrently scheduled with course CM245. Letter grading.

C106. Topics in Biophysics, Channels, and Membranes. (4) (Same as Bioengineering M106.) Lecture, three hours; discussion, one hour; outside study, eight hours. Requisites: Chemistries 20B, Life Sciences 2, 3, 4, Mathematics 33B, Physics 1C, 4AL, 4BL. Coverage in depth of physical processes associated with biological membranes and channel proteins, with specific emphasis on electrophysiology. Basic physical principles governing electrostatics in dielectric media, building on complexity to ultimately address action potentials and signal propagation in nerves. Topics include Nernst/Planck and Poisson/Boltzmann equations, Nernst potential, Poisson potential, energy barriers in ion channels, cable action, equation potentials, Hodgkin/Huxley equations, impulse propagation, axon geometry and conduction, dendrite propagation. Concurrently scheduled with course C206. Letter grading.

C107. Polymer Chemistry for Bioengineers. (4) (Same as Bioengineering M107.) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisites: course CM104 or CM105. Fundamental concepts of polymer synthesis, including step-growth, chain-growth, (ionic, radical, metal catalyzed), and ring-opening polymerization, with focus on factors that control chain length, chain length distribution, and chain-end functionality, chain copolymerization, and stereochemistry in polymerizations. Presentation of applications of synthetic amphiphilic block and graft copolymers. Concepts of step-growth, chain-growth, ring-opening, and coordination polymerization, and effects of synthesis procedures on physicochemical properties of polymers. Focus on polymerization techniques and the application of polymer knowledge to human biology. Concurrently scheduled with course C207. Letter grading.

C131. Nanopore Sensing. (4) (Same as Bioengineering M131.) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisites: Bioengineering 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 literature and technological applications. History and instrumentation of electrical pulse sensors, theory and instrumentation of electrical measurements in electrolytes, nanopore fabrication, ionic conductance theory, patch clamp and single channel measurements and instrumentation. Applications to DNA sequencing, single protein sensing, nanopore sensing, and biophysical and biotechnical applications. Concurrently scheduled with course C231. Letter grading.

C140. Introduction to Biomechanics. (4) (Same as Mechanical and Aerospace Engineering CM140.) Lecture, four hours; discussion, two hours; outside study, six hours. Enforced requisites: Mechanical and Aerospace Engineering 101, 102, 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 CM150. Letter grading.

C145. Molecular Biotechnology for Engineers. (4) (Same as Chemical Engineering CM145.) Lecture, four hours; discussion, one hour; outside study, eight hours. 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 microarrays, antibodies and protein-based diagnostics, genomics and bioinformatics, isolation of human genes, gene therapy, and tissue engineering. Concurrently scheduled with course CM150. Letter grading.

C147. Applied Tissue Engineering: Clinical and Industrial Perspective. (4) (Formerly numbered C187.) Lecture, three hours; discussion, two hours; outside study, seven hours. Requisites: 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 biopolymer 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 vessels, nerves, liver, kidney, and other organs. Clinical and industrial perspectives of tissue engineering products. Manufacturing constraints, clinical limitations, and regulatory challenges in design and development of tissue-engineering devices. Concurrently scheduled with course C247. Letter grading.

C150. Introduction to Micromachining and Microelectromechanical Systems (MEMS). (4) (Same as Electrical Engineering CM150 and Mechanical and Aerospace Engineering CM150.) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisites: Chemistries 20A, 20L, Physics 1A, 1B, 1C, 4AL, 4BL. Corequisite: course CM150. Introduction to micromachining technologies and microelectromechanical systems (MEMS). Methods of micromachining and diagnostic use of energy delivery devices in medical and dental applications, with emphasis on understanding fundamental mechanisms underlying various types of energy delivery interactions. Concurrently scheduled with course CM250A. Letter grading.

C150L. Introduction to Micromachining and Microelectromechanical Systems (MEMS) Laboratory. (2) (Same as Electrical Engineering CM150L and Mechanical and Aerospace Engineering CM150L.) Lecture, one hour; laboratory, four hours; outside study, one hour. Requisites: Chemistries 20A, 20L, Physics 1A, 1B, 1C. Corequisite: course CM150. Hands-on introduction to micromachining technologies and microelectromechanical systems (MEMS) laboratory. Methods of micromachining and how these methods can be used to design a variety of MEMS, including microstructures, microsensors, and microactuators. Students go through process of fabricating MEMS device. Concurrently scheduled with course CM250L. Letter grading.

C170. Energy-Tissue Interactions. (4) Lecture, three hours; outside study, nine hours. Requisites: Electrical Engineering 172, 175, Life Sciences 3, Physics 17. Corequisite: course C170L. 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 delivery interactions. Concurrently scheduled with course C270. Letter grading.

C170L. Introduction to Techniques in Studying Laser-Tissue Interaction. (2) Laboratory, four hours; outside study, two hours. Corequisite: course C170. Introduction to techniques used in studying laser-tissue interactions. Topics include computer simulations of light propagation in tissue, measuring absorption spectra of tissue/tissue phantoms, making tissue phantoms, determination of optical properties of different tissues, techniques of temperature distribution measurements. Concurrently scheduled with course C270L. Letter grading.


C172. Design of Minimally Invasive Surgical Tools. (4) (Same as Bioengineering M172.) Lecture, three hours; discussion, two hours; outside study, seven hours. Requisites: course CM102, Chemistry 20A, 20B, 20L, Life Sciences 1 or 2. Introduction to optical design and engineering concepts used in design and manufacture of tools for minimally invasive surgery. Coverage of FDA regulations and standard surgical procedures. Topics include optical devices, endoscopes and laparoscopes, biopsy devices, laparoscopic tools, cardiovascular and interventional radiology devices, orthopaedic instrumentation, and integration of devices with therapy. Examination of complex process of tool de-
sign, fabrication, testing, and validation. Preparation of drawings and consideration of development of new and improved novel devices, concurrently scheduled with course C272. Letter grading.

CM180. Introduction to Biomaterials. (Same as Materials Science CM180.) Lecture, three hours; discussion, two hours; outside study, seven hours. Requisites: Chemistry 20A, 20B, 20L. Introduction to fundamental principles of chemistry and engineering materials; physical, chemical, and biological properties of human tissues and tissue substitutes; materials to repair, replace, and facilitate healing of human tissue damage. Letter grading.

CM181. Biomaterials-Tissue Interactions. (4) Lecture, three hours; outside study, nine hours. Requisites: course CM180. In-depth exploration of host cellular response to biomaterials; vascular response, interface, and clotting, biocompatibility, animal models, inflammation, infection, extracellular matrix, cell adhesion, and role of mechanical forces. Concurrently scheduled with course C281. Letter grading.

CM183. Targeted Drug Delivery and Controlled Drug Release. (4) (Same as Bioengineering M183.) Lecture, three hours; discussion, two hours; outside study, seven hours. Requisites: Chemistry 20A, 20B, 20L. New directions for effective delivery of drugs; advances in 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. Letter grading.

M184. Introduction to Computational and Systems Biology. (2) (Formerly numbered M186A.) (Same as Computational and Systems Biology M184 and Computer Science M184.) Lecture, two hours; outside study, four hours. Requisites: Computer Science 31 (or Program in Computing 10A), Mathematics 31A, 31B. Survey course designed to introduce students to computational modeling and simulation, bioinformatics, systems biology, and the central role of quantitative methods in modern biology, human genetics, and medicine. Letter grading.

C185. Introduction to Tissue Engineering. (4) Lecture, three hours; discussion, one hour; outside study, eight hours. Requisites: course CM102 or CM202, Chemistry 20A, 20B, 20L. Tissue engineering is the merging of biological and engineering principles with engineering approach to regenerate tissues and organs. Guiding principles for proper selection of three basic components for tissue engineering: cells, scaffolds, and molecular signals. Concurrently scheduled with course C283. Letter grading.

CM186. Computational Systems Biology: Modeling and Simulation of Biological Systems. (5) (Formerly numbered CM186A.) (Same as Computational and Systems Biology M186B and Computer Science CM186.) Lecture, four hours; laboratory, three hours; outside study, eight hours. Corequisite: Electrical Engineering 140A. Computer simulation methods for studying biological/bio-medical processes and systems at multiple levels of organization. Control system, multicompartamental, computer simulation of biological systems, and computer simulation techniques. Concurrently scheduled with course C285. Letter grading.

CM201. Introduction to Biomedical Engineering. (4) Lecture, three hours; laboratory, three hours; outside study, six hours. Designed for physical sciences, life sciences, and engineering students. Introduction to wide scope of biomedical engineering via treatment of selected important individual topics by small team of specialists. Concurrently scheduled with course C101. Letter grading.

CM202. Basic Human Biology for Biomedical Engineers I. (4) (Same as Physiological Science CM204.) 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 CM102. Letter grading.

CM203. Basic Human Biology for Biomedical Engineers II. (4) (Same as Physiological Science CM203.) Lecture, three hours; discussion, one hour; outside study, eight 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 modeling/simulation (immune regulation, wound healing, muscle mechanics and energetics, acid-base balance, excretion). Functional basis of biomedical instrumentation (diagnosis, artificial skin, pathogen detectors, ultrasound, birth-control drug delivery). Concurrently scheduled with course C204. Letter grading.

C204. Physical Chemistry of Biomacromolecules. (4) Lecture, three hours; discussion, 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 the physical chemistry of biomacromolecules such as protein or DNA can be analyzed and characterized by applying fundamental theories of polymer physical chemistry. Investigation of polymer structure and conformation, bulk and solution thermodynamics and phase behavior, polymer networks, and electrical properties. Application of polymer physical principles to problems involving biomacromolecules such as protein conformation, solvation of charged species, and separation and characterization of biomacromolecules. Concurrently scheduled with course CM104. Letter grading.

C205. Biopolymer Chemistry and Bioconjugates. (4) Lecture, four hours; discussion, one hour; outside study, nine hours. Requisites: Chemistry 20A, 20B, 20L. Highly recommended: one organic chemistry course. Bioconjugate chemistry is science of coupling biomolecules for wide range of applications. Oligonucleotides may be one surface in gene chip, or one protein may be coupled to one polymer to enhance its stability in serum. Wide variety of bioconjugates are used in delivery of pharmaceuticals, in sensors, in medical diagnostics, and in tissue engineering. Basic concepts of chemical ligation, including choice and design of conjugate linkers depending on type of biomolecule and desired application, such as degradation versus nondegradation of conjugates; orientation and discussion of design and synthesis of synthetic bioconjugates for some sample applications. Concurrently scheduled with course CM105. Letter grading.

C206. Topics in Biophysics, Channels, and Membranes. (4) Lecture, three hours; discussion, one hour; outside study, eight hours. Requisites: Chemistry 20B, Life Sciences 2, 3, 4, Mathematics 33B, Physics 1C, 4AL, 4BL. Coverage in depth of physical processes associated with biological membranes and channel proteins, with special emphasis on electrophysiology. Basic physical principles governing transport in di-electric media, building on complexity to ultimately address action potentials and signal propagation in nerves. Topics include Nernst/Plank and Poisson/Boltzmann equations, Debye-Huckel, GHK equations, energy barriers in ion channels, cable equation, action potentials, Hodgkin-Huxley equations, impulse propagation, axon geometry and conduction, dendritic integration. Concurrently scheduled with course CM106. Letter grading.

C207. Polymer Chemistry for Bioengineers. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisites: courses C204 or C205. Fundamental concepts of polymer synthesis, including step-growth, chain growth (ionic, radical, metal catalyzed), and ring-opening, with focus on factors that can be used to control chain length and distribution, and chain-end functionality, chain copolymerization, and stereochemistry in polymers. Presentation of applications of use of different polymerization techniques. Concepts of step-growth, chain-growth, ring-opening, and coordination polymerization, and effects of synthesis route on polymer properties. Lectures include both theory and practical issues demonstrated through examples. Concurrently scheduled with course CM107. Letter grading.


M215. Biochemical Reaction Engineering. (4) (Same as Chemical Engineering CM215.) Lecture, four hours; discussion, one hour; outside study, seven hours. Elective. Requisite: Chemical Engineering 101C. Use of previously learned concepts of biochemical physical chemistry, thermodynamics, transport phenomena, and reaction kinetics to develop tools needed for technical design and economic analysis of biological reactors. Letter grading.

M217. Biomedical Imaging. (4) (Same as Electrical Engineering M217.) Lecture, three hours; discussion, one hour; outside study, nine hours. Elective. Requisite: Electrical Engineering 113. Use of previously learned concepts of electrical imaging techniques, and other nonoptical imaging modalities (magnetic resonance imaging, computerized axial tomography, X-ray computed tomography, and magnetic resonance imaging). Other nonoptical imaging modalities discussed briefly for comparison purposes. Letter grading.

M219. Principles and Applications of Magnetic Resonance Imaging. (4) (Same as Electrical Engineering M219.) Lecture, three hours; discussion, one hour. Basic principles of magnetic resonance (MR), physics, and image formation. Emphasis on hardware, Bloch equations, analytic expression, image contrast mechanisms, and spin and gradient echoes. Fourier transform
imaging methods, structure of pulse sequences, and spectroscopy. Letter grading.

220. Introduction to Medical Informatics. (2) Lecture, two hours; outside study, four hours. Designed for graduate students. Introduction to research topics and issues in medical informatics for students new to field. Definition of this emerging field of study, current research efforts, and future directions in research. Key issues in medical informatics to expose students to different areas, such as information extraction and representations, information retrieval and visualization, health services research, telemedicine. Emphasis on current research endeavors and applications. S/U grading.

221. Human Anatomy and Physiology for Medical and Imaging Informatics. (4) Lecture, four hours; outside study, eight hours. Designed for graduate students. Introduction to basic human anatomy and physiology, with particular emphasis on understanding and visualization of anatomy and physiology through medical images. Topics relevant to acquisition, representation, and dissemination of anatomical knowledge in computerized clinical applications. Topics include chond, cardiovascular, gastrointestinal, genitourinary, musculoskeletal, nervous, and vascular systems. Introduction to basic imaging physics (magnetic resonance, computed tomography, ultrasound, computed radiography) to provide context for imaging modalities predomi- nantly used to view human anatomy. Geared toward nonphysicians who require more formal understanding of human anatomy/physiology. Letter grading.

223A-223B-223C. Programming Laboratories for Medical Imaging Informatics. (4) Lecture, one hour; lab, 2, 3, 4; 4-4-4. Lecture, two hours; laboratory, two hours; outside study, eight hours. Designed for graduate students. Programming laboratories to support coursework in other medical informatics courses. Exposure to programming concepts for medical applications, with focus on basic abstraction tech- niques used in image processing and medical informa- tion system infrastructures. Letter grading. 223A. Req- uisites: Computer Science 31, 32, Program in Computing 20A, 20B. Course 223A is prerequisite to 223B, which is prerequisite to 223C. Integrated with topics presented in course M227 to reinforce concepts pre- sented with practical experience. Projects focus on un- derstanding medical networking issues and implementa- tions. Projects focus on healthcare environments with emphasis on use of DICOM. Introduction to basic tools and methods used within informatics. 223B. Req- uisite: course 223A. Integrated with topics presented in coursework for graduate students. Course 223B to reinforce concepts presented with practical experience. Projects focus on medical image manipulation and decision support sys- tems. 223C. Requisite: course 223B. Exposure to pro- gramming concepts for medical applications, with fo-cus on basic abstraction techniques used to extract meaningful features from medical text and imaging data and visualize results. Integrated with topics pre- sented in courses 224B and 226 to reinforce concepts pre- sented with practical experience. Projects focus on medical information retrieval, knowledge repre- sentation, and visualization.

224A-224B. Biomedical and Informatics of Medical Imaging. (4) Lecture, four hours; laboratory, eight hours. Requi- sites: Mathematics 33A, 33B. Designed for graduate students. Introduction to principles of medical imaging and information processing. Overview of core imaging modalities: X-ray, computed tomography (CT), and magnetic resonance (MR). Topics include signal generation, localization, and quantification. Image reconstruction and display techniques, such as Markov random fields, spatial characterization (atlas- es), denoising, energy representations, and clinical im- aging workstation design. Provides basic understanding of application domains of the medical image analysis system. Tutorial and analysis. Current research efforts with focus on clinical applications and new types of information made available through these modalities. Letter gradiing.

224B. Advances in Imaging Informatics. (4) Lecture, four hours; outside study, eight hours. Requisite: coursework 224A or equivalent. Technical and theoretical techniques in medical imaging and informatics-based ap- plications of imaging, with focus on various advances in field. Introduction to core concepts in information retrieval and representation, relevance ranking IR systems and their use in medicine (e.g., tea- ching files, case-based retrieval, etc.). Medical content-based im- age retrieval (CBIR) as motivating application, with ex- amination of core works in this area. Techniques to re- realize medical CBIR, including image feature extraction and processing, feature representation, classification schemes (via machine learning), image indexing, im- age querying and visualization of images (e.g., perception, presentation). Discussion of more advanced methods now being pursued by researchers. Letter grading.

225. Biosensor and Bioprocess Engineering. (4) (Same as Chemical Engineering C225.) Lecture, four hours; discussion, one hour; outside study, seven hours. Corequisite: Chemical Engineering 10C, 10P. Overview of instrumentation, information extraction and representations, information retrieval (IR), reviewing seminal papers on evaluating IR systems. Introduction to core concepts in information retrieval. Review of work in constructing ontologies, with focus on problems in implementation and defini- tion. Common medical ontologies, coding schemes, and standards (e.g., SNOMED, UMLS). Letter grading.

226. Medical Knowledge Representation. (4) (Formerly numbered 226.) (Same as Information Stud- ies M253.) Seminar, four hours; outside study, eight hours. Designed for graduate students. Issues related to knowledge representation and its applications in healthcare processes. Topics include data struc- tures used for representing knowledge (conceptual graphs, frame-based models), different data models for representing spatio-temporal information, rule-based implementations, current statistical methods for discover- y of knowledge (data mining, statistical classifiers, and rule-based). Letter grading.

227. Medical Information Infrastructures and In- ternet Technologies. (4) (Formerly numbered 227.) (Same as Information Studies M254.) Lecture, four hours; outside study, eight hours. Designed for gradu- ate students. Introduction to networking, communica- tions, and information infrastructures in medical envi- ronments. Overview of NICs and TCP/IP-based. Working at several levels: low-level (TCP/IP/PT, services), medium-level (network topologies), and high-level (dis- tributed computing, Web-based services) implementa- tion. Study of 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.

228. Medical Decision Making. (4) (Formerly num- bered 228.) (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 concepts of evi- dence-based medicine and decision processes relat- ed to process of care and outcomes. Basic probability and statistics to understand research results and eval- uations, and algorithmic methods for decision-making processes (Bayes theorem, decision trees). Study de- sign, hypothesis testing, and estimation. Focus on technical advances in medical decision support sys- tems and expert systems, with review of classic and current research. Introduction to common statistical and decision-making tools and techniques. Letter grading.

229. Nanopore Sensing. (4) (Formerly num- bered 231.) Lecture, four hours; discussion, one hour; outside study, six hours. Requisites: Biochemistry 20A, 20B. 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. Emphasis on biomaterials, cell source, delivery methods, FDA approval processes, and physical/chemical and biological testing. Case studies include skin and artificial skin, bone and carti- lage, blood vessels, neurotissue engineering, and liver, kidney, and other organs. Clinical and industrial per- spectives of tissue engineering products. Manufacturing constraints, clinical limitations, and regulatory chal- lenges in design and development of tissue-engineer- ing devices. Concurrently scheduled with course CM230B. Letter grading.

230. Introduction to Biomechanics. (4) (Formerly numbered 227.) Lecture, three hours; discussion, two hours; outside study, seven hours. Requisites: course CM202, Chem- istry 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, cell source, delivery methods, FDA approval processes, and physical/chemical and biological testing. Case studies include skin and artificial skin, bone and cartilage, blood vessels, neurotissue engineering, and liver, kidney, and other organs. Clinical and industrial pers- pectives of tissue engineering products. Manufacturing constraints, clinical limitations, and regulatory chal- lenges in design and development of tissue-engineer- ing devices. Concurrently scheduled with course CM230B. Letter grading.

230A. Introduction to Microfabrication and Mi- croelectromechanical Systems (MEMS). (4) (Same as Electrical Engineering CM250A and Mechanical and Aerospace Engineering CM280A.) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisites: Chemistry 20A, 20L, Physics 1A, 1B, 1C, 4AL, 4BL. Corequisite: course CM250L. Intro- duction to microfabrication and micro- electromechanical systems (MEMS). Methods of mi- crofabrication and how these methods can be used to produce variety of MEMS, including microstructures, microsensors, and microactuators. Students design microfabrication processes capable of achieving de- sired MEMS device. Concurrently scheduled with course CM2150. Letter grading.

Materials issues such as chemical resistance, corrosion, mechanical properties, and residual/intrinsic stress.

CM250L. Introduction to Micromachining and Microelectromechanical Systems (MEMS) Laboratory. (2) (Same as Electrical Engineering CM250L and Mechanical and Aerospace Engineering CM280L.) Lecture, one hour; laboratory, four hours; outside study, one hour. Requisites: Chemistry 20A, 20L, Physics 1A, 1B, 1C, 4AL, 4BL. Corequisite: course CM250A. Hands-on introduction to micromachining technologies and microelectromechanical systems (MEMS) laboratory. Methods of micromachining and how these methods can be used to produce variety of MEMS, including microstructures, microsensors, and microactuators. Students go through process of fabricating MEMS device. Concurrently scheduled with course CM150L. Letter grading.

M252. Microelectromechanical Systems (MEMS) Device Physics and Design. (4) (Formerly numbered M250B.) (Same as Electrical Engineering M252 and Mechanical and Aerospace Engineering M282.) Lecture, four hours; outside study, eight hours. Introduction to MEMS design, design methods, design three 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.


M260. Neuroengineering. (4) (Same as Electrical Engineering M255 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 signals, filtering, spike sorting, stimulation, spike sorting, stimulation artifact removal), computer interfaces, deep brain stimulation, and prosthetics. Letter grading.


M263. Neuroanatomy: Structure and Function of Nervous System. (4) (Same as Neuroscience M203.) Lecture, four hours; laboratory, two hours; outside study, seven hours. Anatomy of central and peripheral nervous system at cellular histological and regional systems level, with emphasis on contemporary experimental approaches to morphological study of nervous system in discussions of circuitry and neurochemical anatomy of major brain regions. Consideration of representative vertebrate and invertebrate nervous systems. Letter grading.

C270L. Energy-Tissue Interactions. (4) Lecture, three hours; outside study, nine hours. Requisites: Electrical Engineering 172, 175, Life Sciences 3, Physics 17. Introduction to tissue interactions with 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 C170L. Letter grading.

C270L. Introduction to Techniques in Studying Laser-Tissue Interaction. (2) Laboratory, four hours; outside study, two hours. Requisites: Chemistry 20A, 20L, Physics 1A, 1B, 1C, 4AL, 4BL. Corequisites: course CM270L. Introduction to simulation and experimental techniques used in studying laser-tissue interactions. Topics include computer simulations of light propagation in tissue, measuring and simulating tissue phantom parameters, making tissue phantoms, determination of optical properties of different tissues, techniques of temperature distribution measurements. Concurrently scheduled with course C170L. Letter grading.

C271. Laser-Tissue Interaction II: Biologic Spectroscopy. (4) Lecture, four hours; outside study, eight hours. Requisite: course C270L. Designed for physical sciences, life sciences, and engineering majors. Introduction to optical spectroscopy principles, design of spectroscopic measurement devices, optical properties of tissues, and fluorescence spectroscopy biological measurement. Concurrently scheduled with course C171L. Letter grading.

C272. Design of Minimally Invasive Surgical Tools. (4) Lecture, three hours; discussion, two hours; outside study, seven hours. Requisites: Chemistry 30B, Life Sciences 2, 3, Mathematics 32A. 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 endoscopes and laparoscopes, biopsy devices, laparoscopic tools, cardiovascular and interventional radiology devices, orthopedic instrumentation, and integration of design/development with the processes of tool design, fabrication, testing, and validation. Preparation of drawings and consideration of development of new and novel devices. Concurrently scheduled with course CM172L. Letter grading.

CM280. Introduction to Biomaterials. (4) (Same as Materials Science CM280.) Lecture, three hours; discussion, two hours; outside study, seven hours. Requisites: Chemistry 30A, 30B, 30L, and Mathematics 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 CM180L. Letter grading.


282. Biomaterial Interfaces. (4) Lecture, four hours; laboratory, eight hours. Requisite: course CM180 or CM280. Function, utility, and biocompatibility of biomaterials depend critically on their surface and interfacial properties. Discussion of morphology and composition of biomaterials and nanoscales, mesoscales, and macroscales, techniques for characterizing structure and properties of biomaterial interfaces, and methods for designing and fabricating biomaterials with prescribed structure and properties in vitro and in vivo. Letter grading.

C283. Targeted Drug Delivery and Controlled Drug Release. (4) Lecture, three hours; discussion, two hours; outside study, eight hours. Requisites: Chemistry 20A, 20B, 20L. New therapies require comprehensive understanding of modern biology, physiology, biomaterials, and engineering. Targeted delivery of genes and drugs and their controlled release are important in treatment of challenging diseases and relevant to tissue engineering and regenerative medicine. Drug delivery and pharmacokinetics are presented in this course. Emphasis is placed on understanding fundamental principles and application of engineering principles (diffusion, transport, kinetics) to problems in drug formulation and delivery to establish rationale for design and development of novel drug delivery systems that can achieve spatial and temporal control of drug release. Introduction to biomaterials 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 CM286. Functional Neuroimaging: Techniques and Applications. (3) (Same as Biomedical Physics M285, Neuroscience M285, Psychiatry M285, and Psychology M278.) Lecture, three hours. In-depth examination of activation imaging, including fMRI 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.

C284. Introduction to Tissue Engineering. (4) Lecture, three hours; discussion, one hour; outside study, eight hours. Requisites: course CM1102 or CM202, Chemistry 20A, 20B, 20L. Tissue engineering applies principles of biology and physical sciences with engineering approach to regenerate tissues and organs. Guiding principles for proper selection of three basic components for tissue engineering: cells, scaffolds, and molecular signals. Concurrently scheduled with course C185L. Letter grading.

CM286. Computational Systems Biology: Modeling and Simulation of Biological Systems. (5) (Formerly numbered CM286.) Lecture, four hours; laboratory, three hours; outside study, eight hours. Corequisite: Electrical Engineering 102. Dynamic biosystems modeling and simulation for understanding biological systems at multiple levels of organization. Control system, multicompartiment, predator-prey, pharmacokinetic (PK), pharmacodynamic (PD), and other structural modeling methods applied to life sciences problems at molecular, cellular (biochemical pathways/networks), organ, and organismal levels. Both theory- and data-driven modeling, with focus on translating the modeling 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. Concurrently scheduled with course CM116L. Letter grading.

CM287. Thesis Research and Research Communication in Computational and Systems Biology. (2 to 4) (Formerly numbered CM286.) (Same as Computer Science CM287.) Lecture, one hour; discussion, two hours; laboratory, one hour; outside study, eight hours. Requisite: course CM286. Closely directed, in-depth investigation of current research paradigms, and how to interpret results. Laboratory investigating paradigms, and how to interpret results. Laboratory research reporting, both oral and written. Concurrently scheduled with course CM187L. Letter grading.

295A-295Z. Seminars: Research Topics in Biomedical Engineering and Bioengineering. (1 to 4) Seminar, one to four hours. Limited to biomedical engineering graduate students. Advanced study and analysis of current topics in bioengineering. Discussion of current research and literature in research specialty for faculty member teaching course. Student presentation of projects in research specialty. May be repeated for credit. S/U grading.

295A. Biomedical Research.

295B. Biomaterials and Tissue Engineering Research.

295C. Minimally Invasive and Laser Research.

295D. Hybrid Device Research.

295E. Molecular Cell Bioengineering Research.

295F. Biopolymer Materials and Chemistry.

M296A. Advanced Modeling Methodology for Dynamic Biological Systems. (Same as Electrical Engineering C291L, Computer Science C296A, and Medicine M270C.) Lecture, four hours; outside study, eight hours. Requisite: Electrical Engineering 141 or 142 or Mathematics 115A or Mechanical and Aerospace Engineering 142A and Computer Science 296A. Development of dynamic systems modeling methodology for physiological, biomedical, pharmaceutical, chemical,
and related systems. Control system, multicompart-
mental, noncompartmental, and input/output models, linear, non-linear. Emphasis on model applications,
limitations, and relevance in biomedical sciences and
other limited data environments. Problem solving in PC
laboratory. Letter grading.

M296B. Optimal Parameter Estimation and Experi-
ment Design for Biomedical Systems. (4) (Same as
Biometrics M270, Computer Science M296B, and
Medicine M270D.) Lecture, four hours; outside
study, eight hours. Requisite: course M296A or Bio-
mathematics 220. Estimation methodology and model
parameter estimation algorithms for fitting dynamic
system models to biomedical data. Model discrimina-
tion methods. Theory and algorithms for designing op-
timal experiments for developing and quantifying mod-
els, 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.

M296C. Advanced Topics and Research in Bio-
medical Systems Modeling and Computing. (4)
(Same as Biometrics M270, Computer Science M296B, and
Medicine M270D.) Lecture, four hours; outside study, eight
hours. Requisite: course M296A. Recommended:
course M296B. Research techniques and experience on
specific computer models, modeling methods, and
model/computing in biological and medical sciences.
Review and critique of literature. Research problem
searching and formulation. Approaches to solutions.
Individual M.S.- and Ph.D.-level project training. Letter
grading.

M296D. Introduction to Computational Cardiology.
(4) (Same as Computer Science M296D.) Lecture, four
hours; outside study, eight hours. Requisite: course
CM186B. Introduction to mathematical modeling and
computer simulation of cardiac electrophysiological
process. Ionic models of action potential (AP), Theory
of AP propagation in one-dimensional and two-dimen-
sional cardiac tissue. Simulation on sequential and
parallel supercomputers, choice of numerical algo-
risms, to optimize accuracy and to provide computa-
tional stability. Letter grading.

298. Special Studies in Biomedical Engineering.
(4) Lecture, four hours; outside study, eight hours.
Study of selected topics in biomedical engineering
taught by resident and visiting faculty members. Letter
grading.

299. Seminar: Biomedical Engineering Topics. (2)
Seminar, two hours; outside study, four hours. De-
signed for graduate biomedical engineering students.
Seminar, lead domestic and international biomi-
cological engineers from UCLA, other universities, and bi-
omedical engineering companies such as Baxter, Am-
gen, Medtronic, and Guidant on development and ap-
plication of recent technological advances in discipline.
Exploration of cutting-edge developments and chal-
enges in wound healing models, stem cell biology, an-
giogenesis, signal transduction, gene therapy, cDNA
microarray technology, bioterrorism detection, nano-
and micro-hybrid devices, scaffold engineering, and

375. Teaching Apprentice Practicum. (4) Seminar,
to be arranged. Seminar and supervised individual
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. Limited
to graduate biomedical engineering students. Re-
quired of all departmental teaching assistants. May be
taken concurrently while holding TA appointment.
Seminar on communicating bioengineering and bio-
medical engineering to non-engineering audiences,
concepts, and methodologies; teaching assistant prepara-
tion, organization, and presentation of material, including use of visual aids,
grading, advising, and rapport with students. S/U grad-
ing.

596. Directed Individual or Tutorial Studies. (2 to
8) Tutorial, to be arranged. Limited to graduate bio-
medical engineering students. Petition forms to re-
quest enrollment may be obtained from program office.
Supervised investigation of advanced technical prob-
loms. S/U grading.

597A. Preparation for M.S. Comprehensive Exami-
nation. (2 to 12) Tutorial, to be arranged. Limited to
graduate biomedical engineering students. Reading
and preparation for M.S. comprehensive examination.
S/U grading.

597B. Preparation for Ph.D. Preliminary Examina-
tions. (2 to 16) Tutorial, to be arranged. Limited to
graduate biomedical engineering students. S/U grad-
ing.

597C. Preparation for Ph.D. Oral Qualifying Exami-
nation. (2 to 16) Tutorial, to be arranged. Limited to
graduate biomedical engineering students. Prepara-
a for oral qualifying examination, including prelimi-

598. Research for and Preparation of M.S. Thesis.
(2 to 16) Tutorial, to be arranged. Limited to gradu-
ate biomedical engineering students. Supervised indepen-
dent research for M.S. candidates, including thesis
prospectus. S/U grading.

599. Research for and Preparation of Ph.D. Disser-
tation. (2 to 16) Tutorial, to be arranged. Limited to
graduate biomedical engineering students. Usually
taken after students have been advanced to candida-
cy. S/U grading.

BIOMEDICAL PHYSICS
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Michael McNitt-Gray, Ph.D., Chair

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Pharmacology)
Dieter R. Enzmann, M.D. (Radiological Sciences)
Michael McNitt-Gray, Ph.D. (Radiological Sciences)
Michael E. Phelps, Ph.D. (Molecular and Medical
Pharmacology)
Michael L. Steinberg, M.D. (Radiation Oncology)

Scope and Objectives
The Biomedical Physics M.S./Ph.D. Program is an
AAPM-accredited interdepartmental gradu-
ate program supported by the Departments of
Molecular and Medical Pharmacology, Radia-
tion Oncology, and Radiological Sciences. It of-
fers training in four specialties: molecular imag-
ing, medical imaging, therapeutic medical phys-
ics, and radiation biology/experimental radiation therapy. Specialized facilities for train-
ing and research are available in the depart-
mental clinical laboratories, the UCLA-DOE
Laboratory of Structural Biology and Molecular
Medicine, the Image Processing Laboratory, and a
number of associated hospitals. Highly
specialized equipment includes two biomedical
cyclotrons, the radiation oncology cyclotron, the
picture archiving and communication system (PACS),
four positron-emission tomography (PET) scanners, the stereotactic gamma irradi-
ator, and many VAX and SUN computers with
image processor systems. In addition, clinical
equipment is available to supervised students
for practicums and research purposes. The
program prepares students for careers as inde-
dependent researchers or professional medical
physicists, and graduates are qualified to work
in a clinical environment and to pursue board
certification as medical physicists or to apply for
a clinical medical physics residency.

Graduates in biomedical physics can expect to
engage in any combination of research, teach-
ing, clinical service, and consultation. Biomi-
dical 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 de-
velopment of diagnostic equipment. In govern-
ment agencies, biomedical physicists are in-
volved in the formulation and enforcement of
regulations applied to the use of radiation in
healthcare delivery.

Graduate Study
Official, specific degree requirements are de-
tailed in Program Requirements for UCLA
Graduate Degrees, available at the Graduate
Division website, http://www.gdnet.ucla.edu/
gasaa/library/pgmrqintro.htm. In many cases,
more detailed guidelines may be outlined in an-
nouncements, other publications, and websites
of the schools, departments, and programs.

Graduate Degrees
The Biomedical Physics Program offers Master
of Science (M.S.) and Doctor of Philosophy
(Ph.D.) degrees in Biomedical Physics.

Biomedical Physics
Upper Division Course
199. Directed Research in Biomedical Physics. (2
to 4) Tutorial, two hours. Limited to juniors/seniors.
Supervised individual research or investigation under
guidance of faculty mentor. Culminating paper re-
quired. May be repeated for credit. Individual contract
required. P/NP or letter grading.

Graduate Courses
200A. Physics and Chemistry of Nuclear Medicine.
(4) Lecture, three hours; discussion, one hour. Nuclear
structure, statistics of radioactive decay, nuclear radia-
tions and their interaction with matter, nuclear decay
processes, nuclear reactions, and compartment mod-
els. Physical and chemical properties of radioactive
preparations used in nuclear medicine. Basic princi-
plies of nuclear medicine imaging, SPECT, and PET.
S/U or letter grading.

200B. Nuclear Medicine Instrumentation. (4) Lec-
ture, one hour; laboratory, three hours. Requisite:
course 200A. Introduction to nuclear medicine instru-
meter analysis, including x-ray, gamma ray, probe
and well scintillation detectors, scintillation cameras,
and single photon and positron emission computed to-
ography. S/U or letter grading.

201. Medical Radiation Accelerator Design. (4)
Lecture, three hours. Requisite: course 216. Overview
of physical principles involved in design of current par-
ticle accelerators (electron, proton, heavy particle) and
analysis of characteristics of current accelerators and
facility design. S/U or letter grading.
202A-202B-202C. Applications of Medical Physics to Clinical Problems. (4-4-4) Clinic, four hours. Selected studies in clinical use of radioisotopes. S/U or letter grading.


204. Introductory Radiation Biology. (4) Lecture, four hours. Effect of ionizing radiation on chemical and biological systems. S/U or letter grading.

205. Physics of Diagnostic Radiology. (4) Lecture, three hours; laboratory, one hour. Production of X rays, basic interactions between X rays and matter, X-ray system components, physics principles of medical radiography, radiographic image quality, fluoroscopy, image intensifiers, special procedures, X-ray protection. Laboratory experiments illustrate basic theory. S/U or letter grading.

206. Advanced Instrumentation. (4) Lecture, three hours; discussion, one hour. Requisite: course 205. Introduction to digital diagnostic imaging systems, with topics centered on instrumentation including digital subtraction angiography (DSA) methods of producing three-dimensional images. S/U or letter grading.


208A. Medical Physics Laboratory: Medical Imaging. (4) Discussion, two hours; laboratory, 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.

208B. Medical Physics Laboratory: Radiation Therapy. (4) Discussion, two hours; laboratory, four hours. Requisite: present consent of instructor calling treatment planning and radiation therapy equipment. S/U or letter grading.

209. Digital Techniques in Radiological Sciences. (4) Lecture, three hours; discussion, one hour. Preparations: one course in C or another computer language. Basic principles of digital technology used in radiological sciences. Concepts and experience necessary to undertake radiological research in diverse computing environments. Discussion of relationship between computers and diagnostic equipment with regard to data acquisition, equipment interfacing, and data analysis. C language programming. S/U or letter grading.

210. Computer Vision in Medical Imaging. (4) Lecture, three hours; discussion, one hour. Recommended requisites: Mathematics 155, Program in Computing 10A. Stereo vision, feature extraction, object recognition, classification, and visualization with biomedical applications. Topics include region-growing, edge detection, mathematical morphology, clustering, and color. Recommended for students preparing for advanced lectures, case studies, and programming projects. S/U or letter grading.

211. Medical Ultrasound. (4) Lecture, 90 minutes; laboratory, two hours. Preparation: one calculus course. Production of 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) Lecture, three hours; discussion, one hour. Introduction to biochemical processes and application of radioisotopes to study metabolism noninvasively by positron-emission tomography (PET). Validation of kinetic models to derive quantitative information from PET images. Clinical applications, experimental application of PET. S/U or letter grading.

213. Quantitative Autoradiography. (4) Lecture, three hours; discussion, one hour. Application of quantitative autoradiography for estimating brain and heart function. Topics include use of radioisotopes for determining the metabolic rate; iodooantipyrine method for blood flow; amino acid method for protein synthesis; quantitative receptor autoradiography; neuroanatomy and neuropharmacology of autoradiography and PET scan interpretation. Letter grading.


217. Statistics and Data Analysis in Biomedical Physics. (4) 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 pack- ages and various statistical computing algorithms on relevant data sets within radiological sciences. Letter grading.

218. Radiologic Functional Anatomy. (2) Lecture, two hours. Introduction to human anatomy, cell biology, and physiology as visualized through microscopy, molecular imaging, radiography, CT, MRI, ultrasonogra- phy, PET, and SPECT. Letter grading.

219. Principles and Applications of Magnetic Resonance Imaging. (4) (Formerly numbered 219.) (Same as Biomedical Engineering M219.) Lecture, three hours; discussion, one hour. Basic principles of magnetic resonance (MR), physics, and image forma- tion. Emphasis on hardware, Bloch equations, analytic expressions, image contrast mechanisms, spin and gradient echoes, Fourier transform imaging methods, structural imaging techniques, pulse sequence design, and high in-depth analysis of imaging techniques that exploit interaction between biology and imaging. Letter grading.


233. Seminar: Radiation Biology. (4) Seminar, four hours. Exploration of physiologic and molecular mech- anisms that impact on response of normal and malign- ant tissues to ionizing radiation, with particular em- phasis on critical and high in-depth analysis of ap- proaches through which such responses can be modified in therapeutic setting. Understanding of ratio- nale for integrating biological information into process of treatment planning and delivery. S/U or letter grading.

227. Human Disease: Current and Future Role of Biomedical Physics. (4) Lecture, three hours; discussion, one hour. Present and future roles of biomedical physics in diagnosis and treatment of human disease, with focus on interdisciplinary nature of this field. Explo- ration of two diseases in depth with detailed de- scription of roles of physics-based diagnostic imaging and therapeutic options for each disease. Description of current and future technology and techniques that exploit interaction between biology and imaging. Letter grading.

230. Computed Tomography: Theory and Appli- cations. (4) (Same as Biomedical Engineering M230 and Pharmaceut- ical M248.) Lecture, three hours; laboratory, one hour; outside study, seven hours. Examination of role of digital imaging in modern biology and medicine, in- cluding imaging physics, instrumentation, image pro- cessing, and applications of imaging for range of modalities. Practical experience provided through series of imaging laboratories. Letter grading.


265. Advanced Magnetic Resonance Imaging. (4) (Same as Neuroscience M265 and Psychiatry M266.) Lecture, four hours. Starting with basic princi- ples, presentation of physical basis of magnetic reso- nance imaging (MRI), with emphasis on developing advanced applications in biomedical imaging, includ- ing both structural and functional studies. Instruction more intuitive than mathematical. Letter grading.


269. Seminar: Medical Imaging. (1) Seminar, one hour. Continuous registration required of students in medical imaging specialty. Topics of current interest in medical imaging. Lecture, with lectures in small groups, conferences, lab, other universities, and private industry. S/U or letter grading.

285. Functional Neuroimaging: Techniques and Applications. (3) (Same as Biomedical Engineering M284, Neuroscience M285, Psychiatry M285, and Psychology M278.) Lecture, three hours. In-depth ex- amination 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 under- standing technologies, how to design activation imag-
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. Honors College 70A, Life Sciences 10H, or an approved alternative course. Applications 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 M168, M169, Philosophy 124, 125, 132, or 155; and (3) Biomedical Research 193H and 194H, or the required journal club seminars (such as Biological Chemistry, Chemistry and Biochemistry) for students in the Howard Hughes 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.

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) Formerly numbered Life Sciences 5HA. 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) Formerly numbered Life Sciences 5HB. Lecture, three hours; discussion, one hour. Requirements: 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. Student investigation of one or more laboratories on campus and presentation of brief synopsis of single research project from one laboratory. Letter grading.

Upper Division Courses


194H. Research Group Seminars: Data Presentation in Biomedical Research. (2) Formerly numbered Life Sciences 194H. Seminar, two hours. Requirements: course 193H. Limited to Biomedical Research minor students. Preparation 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

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William G. Cumberland, Ph.D., Chair

Professors

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Dorota M. Dabrowska, Ph.D.
Robert M. Elashoff, Ph.D.
Stefan Horvath, Ph.D., Sc.D.
Gang Li, Ph.D.
Hongli Liu, Ph.D.
Janet S. Sinsheimer, Ph.D.
Marc A. Suchard, Ph.D.
Robert E. Weiss, Ph.D.
Wendy Kong, Ph.D.

M206A-M206B-M206C. Statistics in Psychiatric and Biobehavioral Research. (2-2-2) (Same as Psy- chiatry M286A-M286B-M286C.) Seminar, 90 minutes. Requisite: course 100B. Designed for graduate stu- dents. Examples from psychiatric literature used to il- lustrate statistical ideas and analysis strategies. Topics include experimental designs, sample size calcula- tions, parametric versus nonparametric tests, regression methods, multiple comparisons, variance components, causal inference. Computer used to illustrate basic data analysis. S/U or letter grading.

M208. Introduction to Demographic Methods. (4) (Same as Community Health Sciences M208, Eco- nomics M208, and Sociology M213A.) Lecture, four hours. Preparation: one introductory statistics course. Introduction to methods of demographic analysis. Top- ics include demographic rates, standardization, de- composition of differences, life tables, survival analy- sis, cohort analysis, birth interval analysis, models of population growth, stable populations, population pro- jection, and demographic methods. Letter grading.

M209. Statistical Modeling in Epidemiology. (4) (Same as Epidemiology M212.) Lecture, four hours. Preparation: two terms of statistics (three terms recom- mended). Recommended: Epidemiology M204 or M211. Principles of modeling, including meanings of models, a priori model specification, translation of models into explicit population assumptions, model se- lection, model diagnostics, hierarchical (multilevel) modeling. S/U or letter grading.

M210. Statistical Methods for Categorical Data. (4) (Same as Biomathematics M231.) Lecture, three hours; discussion, one hour. Requisites: course 100B or 110A, Statistics 100B. Topics include regression methods for analysis of categorical data; discussion and illustration of their applications and limitations. S/U or letter grad- ing.

M211. Statistical Methods for Epidemiology. (4) (Same as Epidemiology M211 and Statistics M250.) Lecture, four hours. Preparation: two terms of statistics (such as courses 100A, 100B). Requisites: Epidemi- ology M208, M209, Concepts and methods tailored for analysis of epidemiologic data, with emphasis on tabu- lar and graphical techniques. Expansion of topics intro- duced in Epidemiology 200B and 200C and introduc- tion of new topics, including principles of epidemiologic analysis, trend analysis, smoothing and sensitivity analysis. S/U or letter grading.

212. Distribution Free Methods. (4) Lecture, three hours; discussion, one hour. Requisites: course 100B or 110B, Statistics 100B. Theory and application of dis- tribution free methods in biostatistics. S/U or letter grading.

213. Introduction to Computational Methods in Biostatistics. (4) Lecture, three hours; discussion, one hour. Requisites: course 110B, Statistics 100B. In- troduction to computational methods for biostatistical inference: simulation techniques, numerical integra- tion, numerical optimization, and other general methods.


M220. Advanced Experimental Statistics. (4) 
(Same as Physiological Science M200.) Lecture, four hours. Introduction to statistics with focus on computer simulation instead of formulas. Bootstrap and Monte Carlo methods used to analyze physiological data. S/U or letter grading.

230. Statistical Graphics. (4) Lecture, three hours; discussion, one hour; laboratory, one hour; Requisites: courses 110A, 110B. Graphical data analysis emphasizes use of visual displays of quantitative data to gain insight into data structure by exploring patterns and relationships. Topics include classical numerical methods, especially assumption validity checking. Principles of graph construction, graphical methods, and perception issues. S/U or letter grading.

M232. Statistical Analysis of Incomplete Data. (4) 
(Same as Biometrics M232.) Lecture, three hours; discussion, one hour. Requisite: Statistics 100B. Discussion of statistical analysis of incomplete data sets, with material from sample survey, econometric, biometric, psychometric, and general statistical literature. Topics include treatment of missing data in statistical packages, missing data in ANOVA and regression estimation, weighting, likelihood-based methods, and nonrandom nonresponse models. Emphasis on application of methods to applied problems, as well as on underlying theory. S/U or letter grading.


M234. Applied Bayesian Inference. (4) 
(Same as Biometrics M234.) Lecture, three hours; discussion, one hour; laboratory, one hour. Requisites: courses 115 (or Statistics 100C), 200A. Bayesian approach to statistical inference, with emphasis on biomedical applications and concepts rather than mathematical theory. Topics include large sample Bayes inference from likelihoods 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.

M235. Causal Inference. (4) 

M236. Longitudinal Data. (4) 
(Same as Biometrics M207B and Human Genetics M207B.) Lecture, three hours; discussion, one hour; laboratory, one hour. Requisites: course 200A, one other 200-level biostatistics or statistics course. Longitudinal data analysis, graphing longitudinal data, specifying predictors, modeling variance and covariances, inference, computing, hierarchical models, and random effects. S/U or letter grading.

M237. Applied Genetic Modeling. (4) 
(Same as Biometrics M207B and Human Genetics M207B.) Lecture, three hours; discussion, one hour; laboratory, one hour. Requisites: courses 110A, 110B. 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 M227; students may take either and are encouraged to take both. S/U or letter grading.

M238. Methodology of Clinical Trials. (4) 
(Same as Biometrics M284.) Lecture, three hours; discussion, two hours. Requisites: courses 200A, 2015. Methodology of clinical trials, ethical and statistical considerations, design of clinical trials, analysis of data, and principles of trials. Considerable focus on phase two trials and multiclinical phase three trials. Emphasis on major inferential issues. S/U or letter grading.

M239. Mathematical and Statistical Phylogenetics. (4) 
(Same as Biometrics M211 and Human Genetics M211.) Lecture, three hours; laboratory, one hour. Requisites: courses 110A, 110B, Mathematics 170A. Theoretical methods in molecular evolution, with focus on phylogenetic techniques. Topics include evolutionary tree reconstruction methods, studies of viral evolution, phylogeny, and coalescent approaches. Examples from evolutionary biology and medicine. Laboratory for hands-on computer analysis of sequence data. S/U or letter grading.

240. Master’s Seminar and Research Resources for Graduating Biostatisticians M.S. Students. (4) 
(Same as Psychiatry M232.) Seminar, three hours. Introduction to resources for finding statistical literature. Discussion of principles of making statistical graphs and how to write statistical reports, including writing abstracts and choice of key words. Discussion of journal article preparation and submission format and refereeing process to help students make progress on their master’s reports. Letter grading.


250A-250B. Linear Statistical Models. (4-4) Lecture, three hours; discussion, one hour; Preparation: one other 200-level biostatistics or statistics course. Topics include linear algebra applied to linear statistical models, distribution of quadratic forms, Gauss-Markov theorem, fixed and random component models, balanced and unbalanced designs. 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.


270. Stochastic Processes. (4) 
Lecture, three hours; Preparation: upper division mathematics (including statistics and probability). Stochastic processes applicable to medical and biological research. Letter grading.

M272. Theoretical Genetic Modeling. (4) 
(Same as Biomathematics M207A and Human Genetics M207A.) Lecture, three hours; discussion, one hour. Requisites: Biostatistics M210A, 110B. Mathematical models in statistical genetics. Topics include population genetics, genetic epidemiology, gene mapping, design of genetics experiments, DNA sequence analysis, and molecular phylogeny. S/U or letter grading.


275. Advanced Survival Analysis. (4) 

276. Inference for Multivariate Data that Use Simulation. (4) Lecture, three hours; discussion, one hour. Requisites: Statistics 200A, 200B. Recommended: Biostatistics 213. Theory and application of recently developed techniques in 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.

277. Robustness and Modern Nonparametrics. (4) 

M278. Statistical Analysis of DNA Microarray Data. (4) 
(Same as Human Genetics M278.) Lecture, three hours. Requisites: Mathematics 115A, Statistics 100C. Introduction to theory and design of statistical programs: computing methods for linear and nonlinear regression, dealing with constraints, robust estimation, and general maximum likelihood methods. Letter grading.

279. Optimal Design Theory and Application. (4) 
Lecture, three hours. Preparation: basic programming skills. Requisite: Statistics 200B. Presentation of design methodology for regression problems, with applications to biostatistical problems. Letter grading.

M280. Statistical Computing. (4) 
(Same as Biometrics M280 and Statistics M230.) Lecture, three hours. Requisites: Mathematics 115A, Statistics 100C. Programming for statistical data analysis; use of software packages such as R, S-Plus, and Minitab. S/U 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 data analysis, classification procedures, correspondence analysis, etc. S/U or letter grading.


295. Application of Statistical Theories in Biomedical Research. (4) 
Lecture, three hours; discussion, one hour. Requisite: Statistics 100B. Review of statistical theories essential to biostatisticians. Illustration of applications by examples. Topics include delta method, order statistics, asymptotic properties of MLEs, iterative algorithms for MLEs, generalized likelihood ratio tests for categorical data, and transformations. Letter grading.


400. Field Studies in Biostatistics. (2 or 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 M.P.H. minimum course requirements. Units may be applied toward 44-unit minimum total required for M.P.H. degree. Letter grading.

402A. Principles of Biostatistical Consulting. (2) 
Lecture, one hour; discussion, one hour. Requisite: course 100B or 110B. Presentation of structural format for statistical consulting. Role of statistician and client. Reviews of actual statistician/client interactions and case studies. S/U or letter grading.

402B. Biostatistical Consulting Seminar. (4) 
Discussion, two hours; laboratory, two hours. Requisite: course 402A. Principles and practices of biostatistical consulting. May be repeated for credit. S/U grading.

403A. Computer Management of Health Data. (4) 
Lecture, three hours; laboratory, two hours. Preparation: one statistics course. Concepts of health data management, design and maintenance of large data bases on various media, as well as across networks; computer programming skills and interfaces facilitating data entry, transmission, data retrieval for statistical
analyses, tabulation and report generation useful to bio statisticians, health planners, and other health professionals. Letter grading.

M403B. Computer Management and Analysis of Health Data Using SAS. (4) (Same as Epidemiology M403.) Lecture, two hours; laboratory, two hours. Requirements: courses 100A, 100B (100B may be taken concurrently). Instruction 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.

406. Applied Multivariate Biostatistics. (4) Lecture, three hours; laboratory, one hour. Preparation: at least two upper division research courses. Requisite: courses 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 nondiscussion majors) or letter grading.

409. Doctoral Statistical Consulting Seminar. (2) Seminar, one hour; laboratory, four hours. Designed for doctoral students. Development of 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 antimicrobial 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 non-major level) or letter grading.


412. Statistical Methods for Case-Control Studies. (4) Lecture, three hours. Requisite: course 200A. Statistical designs, sampling statistics, and analytic models of case-control studies. Special topics such as exploratory analyses, multiplicity of analyses, cross validation, small sample performances of variance estimators, measurement error in covariates, and incomplete data. S/U 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 bioassay 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 survey. Techniques for analysis of data, including estimates and standard errors. Avoiding improper use of survey data. Letter grading.

419. Special Topics: Applied Statistics. (4) Lecture, three hours; discussion, one hour. Requisite: course 100B. Special topics in applied statistics not covered in other courses in professional series. S/U or 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.

501. Cooperative Program. (2 to 8) Tutorial, to be arranged. Preparation: consent of UCLA graduate advisor and graduate dean; does not count 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 M.S. minimum total course requirement. May be repeated for credit. Letter 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. May not be applied toward any degree course requirements. May be repeated for credit. S/U grading.

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**Chemical and Biomolecular Engineering**

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

UCLA

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James C. Liao, Ph.D., Vice Chair

Professors

Jane P. Chang, Ph.D. (William Frederick Seyer Professor of Materials Electrochemistry)
Panagiotis D. Christofides, Ph.D.
Voram Cohen, Ph.D.
James F. Davis, Ph.D.
Robert F. Hicks, Ph.D.
Louis J. Ignarro, Ph.D. (Nobel laureate, Jerome J. Belzer Professor of Medical Research)
James C. Liao, Ph.D.
Yunfeng Lu, Ph.D.
Vasilios I. Manousiouthakis, Ph.D.
Harold G. Monbouquette, Ph.D.
Selim M. Senkan, Ph.D.
Yi Tang, Ph.D.

Professors Emeriti

Eldon L. Knuth, Ph.D.
Ken Nobe, Ph.D.
William D. Van Vorst, Ph.D.
Vincent L. Vilker, Ph.D.
A.R. Frank Wazzan, Ph.D., Dean Emeritus

Assistant Professors

Gerassimos Orkoulas, Ph.D.
Tatsiana Segura, Ph.D.

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 cellular and biomolecular engineering, systems engineering, and advanced materials processing and span the general themes of energy/environment and nanotechnology. Aside from the fundamentals of chemical engineering (applied mathematics, thermodynamics, transport phenomena, kinetics, reactor engineering and separations), particular emphasis is given to metabolic engineering, protein engineering, systems biology, synthetic biology, bio-nano-technology, biomaterials, air pollution, water production and treatment, environmental multimedia modeling, pollution prevention, combinatorial catalysis, molecular simulation, process systems engineering, membrane science, semiconductor processing, chemical vapor deposition, plasma processing and simulation, electrochemistry and corrosion, polymer engineering, and hydrogen production.

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 B.S. in Chemical Engineering, is accredited by ABET and AIChE, 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 M.S. and Ph.D. degrees. Both graduate and undergraduate programs closely relate teaching and research to important industrial problems.

Undergraduate Study

The Chemical Engineering major is a designated capstone major. The capstone project requires students to first work individually and then learn to integrate chemical engineering fundamentals taught in prior required courses; then they 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 B.S. Capstone Major**

The ABET-accredited chemical engineering curricula provide a high quality, professionally oriented education in modern chemical engineering. The biomedical engineering, biomolecular...
Schools section earlier in this catalog.

cation requirements, see the College and

proval of the faculty adviser). May be substituted for one of these with ap-

The Major

Required: Chemical Engineering 100, 101A, 101B, 101C, 102A, 102B, 103, 104AL, 104B, 106, 107, 109, Chemistry and Biochemistry 113A, 153A; three technical breadth courses (12 units) selected from an approved list available in the Office of Academic and Student Af-

fairs; two capstone analysis and design courses (Chemical Engineering 108A, 108B); and two elective courses (8 units) from Chemical Engineering 110, C111, C112, 113, C114, C115, C116, C118, C119, C125, C140.

For information on University and general edu-
cation requirements, see the College and Schools section earlier in this catalog.

Environmental Engineering Option

Preparation for the Major

Required: Chemical Engineering 10; Chemistry and Biochemistry 20A, 20B, 20L, 30A, 30AL, 30B; Computer Science 31; Mathematics 31A, 31B, 32A, 32B, 33A, 33B; Physics 1A, 1B, 1C, 4AL, 4BL.

The Major

Required: Chemical Engineering 100, 101A, 101B, 101C, 102A, 102B, 103, 104AL, 104B, 106, 107, 109, Chemistry and Biochemistry 113A, 153A; three technical breadth courses (12 units) selected from an approved list available in the Office of Academic and Student Af-

fairs; two capstone analysis and design courses (Chemical Engineering 108A, 108B); and two elective courses (8 units) from Chemical Engineering 110, C111, C112, 113, C114, C115, C116, C118, C119, C125, C140.

For information on University and general edu-
cation requirements, see the College and Schools section earlier in this catalog.

Biomolecular Engineering Option

Preparation for the Major

Required: Chemical Engineering 10; Chemistry and Biochemistry 20A, 20B, 20L, 30A, 30AL, 30B; Computer Science 31; Life Sciences 2; 3; Mathematics 31A, 31B, 32A, 32B, 33A, 33B; Physics 1A, 1B, 1C, 4AL.

The Major

Required: Chemical Engineering 100, 101A, 101B, 101C, 102A, 102B, 103, 104AL, 104B, 106, 107, 109, Chemistry and Biochemistry 113A. Required: one semester of general chemistry elective may be substituted for one of these with ap-

proval of the faculty adviser).

For information on University and general edu-
cation requirements, see the College and Schools section earlier in this catalog.

Semiconductor Manufacturing Engineering Option

Preparation for the Major

Required: Chemical Engineering 10; Chemistry and Biochemistry 20A, 20B, 20L, 30A, 30AL, 30B; Computer Science 31; Mathematics 31A, 31B, 32A, 32B, 33A, 33B; Physics 1A, 1B, 1C, 4AL.

The Major

Required: Chemical Engineering 100, 101A, 101B, 101C, 102A, 102B, 103, 104AL, 104C, 104CL, 106, 107, 109, C116, Chemistry and Biochemistry 113A, 153A; three technical breadth courses (12 units) selected from an approved list available in the Office of Academic and Student Af-

fairs; two capstone analysis and design courses (Chemical Engineering 108A, 108B); and one elective course (4 units) from Electrical Engineering 2, 100, 121B, 123A, or 123B.

For information on University and general edu-
cation requirements, see the College and Schools section earlier in this catalog.

Graduate Study

Official, specific degree requirements are de-
tailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate

Division website, http://www.gdnnet.ucla.edu/ gasa/library/pgmrqintro.htm. In many cases, more detailed guidelines may be outlined in an-
ouncements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees

The Department of Chemical and Biomolecular Engineering offers Master of Science (M.S.) and Doctor of Philosophy (Ph.D.) degrees in Chemical Engineering.

Chemical Engineering

Lower Division Courses

2. Technology and Environment, (4) Lecture, four hours; outside study, eight hours. Natural and anthropo-
genic 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 cy-

cycles. Flow of materials in industrial economies com-
pared and contrasted with natural flows; presentation of lifecycle methods for evaluating environmental im-
pact of processes and products. P/NP or letter grading.

10. Introduction to Chemical and Biomolecular En-
gineering, (1) Lecture, one hour; outside study, two hours. General introduction to field of chemical and biomolecular engineering. Description of how chemical and biomolecular engineering analysis and design skills are applied for creative solution of current tech-
nological problems in production of microelectronic de-
VICES, design of chemical plants for minimum environ-
mental impact, application of nanotechnology to chem-
ical sensing, and genetic-level design of recombinant microbes for chemical synthesis. Letter grading.

Upper Division Courses

100. Fundamentals of Chemical and Biomolecular Engineering, (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisites: Chemistry 20B, 20L, Mathematics 32B (may be taken concur-
rently), Physics 1A. Introduction to analysis and design of industrial chemical processes. Material and energy balances. Introduction to programming in MATLAB. Letter grading.

101A. Transport Phenomena I, (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisites: Mathematics 33A, 33B. Corequisite: course 101B. Introduction to fluid flow in chemical, biological, materials, and molecular process-
S. Fundamentals of momentum transport, Newton law of viscosity, mass and momentum conservation in lam-

101B. Transport Phenomena II: Heat Transfer, (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Enforced requisite: course 101A. Introduction to analysis of heat transfer in chemical, bi-
ological, materials, and molecular processes. Funda-
mentals of thermal energy transport, molecular-level heat transfer in gases, liquids, and solids, forced and free convection, radiation, and engineering analysis of heat transfer in process systems. Letter grading.

101C. Mass Transfer, (4) Lecture, four hours; discus-
sion, one hour; outside study, seven hours. Requisite: course 101B. 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, inter-
phase mass transfer, multicomponent systems. Letter grading.

102A. Thermodynamics, (4) Lecture, four hours; discus-
sion, one hour; outside study, seven hours. In-
roduction to thermodynamics of chemical and biologi-
cal processes. Work, energy, heat, and first law of ther-
modynamics. Second law, extremum principles, entropy, and free energy. Ideal and real gases, property
evaluation. Thermodynamics of flow systems. Applica-
tions of first and second laws in biological processes
and living organisms. Letter grading.
102B. Thermodynamics II. (4) Lecture, four hours;
discussion, one hour; outside study, seven hours. Req-
uires: course 102A. Fundamentals of classical and
statistical thermodynamics in chemical and biological
sciences. Phase equilibria in single and multiphase
systems. Thermodynamics of ideal and nonideal solu-
tions. Chemical reaction equilibria. Statistical en-
ssemble and partition functions. Statistical thermody-
namics of colloids, polymer interactions and liquid
state. Thermodynamics of polymers and biological
macromolecules. Letter grading.
103. Separation Processes. (4) Lecture, four hours;
discussion, one hour; outside study, seven hours. Req-
uires: courses 100, 101B. Application of principles of
heat, mass, and momentum transport to design and
operation of separation processes such as distillation,
gas absorption, filtration, and reverse osmosis. Letter
grading.
104AL. Chemical and Biomolecular Engineering
Laboratory I. (4) Laboratory, six hours; discussion,
one hour; outside study, five hours. Requires: course
100. Concurrently scheduled with course 102B. Not open
for credit to students with credit for former course 104A. Measurements of tempera-
ture, pressure, density, and flux between stationary
and moving media. Mass and energy balance calcu-
lations. Letter grading.
104BL. Introduction to Bioprocessing. (4) Lecture,
two hours; discussion, two hours; outside study, seven
hours. Requires: course 101B. Operation of bioreactor,
downstream processing of biore-
actor broth to purify recombinant protein, and charac-
terization of purified protein. Letter grading.
105. Chemical Reaction Engineering. (4) Lecture,
four hours; discussion, one hour; outside study, seven
hours. Requisites: courses 100, 101C, 102B. Funda-
mentals of chemical kinetics and catalysis. Introduction
to chemical engineering applications to industrial
electrochemical processes and metallic corrosion. Pri-
mary emphasis on fundamental approach to analysis
electrochemical and corrosion processes. Specific top-
ics include corrosion of metals and semiconductors,
electrochemical metal and semiconductor surface fin-
ishing, passivity, electrodeposition, electroless deposi-
tion, batteries and fuel cells, electrosynthesis and bio-
electrochemical processes. May be concurrently
scheduled with course C214. Letter grading.
106. Chemical Reaction Engineering II. (4) Lecture,
four hours; discussion, one hour; outside study, seven
hours. Requisites: courses 103 (or C125), 105AL, 106 (or C115). Integration of chemical engi-
neering fundamentals such as transport phenomena,
thermodynamics, separation operations, and reaction
engineering and simple economic principles for pur-
pose of designing chemical processes and evaluating
alternative conditions. Letter grading.
108B. Chemical Process Computer-Aided Design
and Analysis. (4) Lecture, four hours; discussion, one
hour; outside study, seven hours. Requisites: courses
103 (or C125), 105AL, 106 (or C115). Use of previous-
literally learned concepts of biophysical chemistry, thermo-
dynamics, transport phenomena, and reaction kinetics
develop tools needed for technical design and econ-
omics for bioprocesses. May be concurrently
scheduled with course CM215. Letter grading.
106A. Process Economics and Analysis. (4) Lecture,
four hours; discussion, one hour; outside study, seven
hours. Requisites: courses 100, 101C. Use of previous-
literally learned concepts of biophysical chemistry, thermo-
dynamics, transport phenomena, and reaction kinetics
develop tools needed for technical design and econom-
ocics for bioprocesses. May be concurrently
scheduled with course CM215. Letter grading.
107. Process Dynamics and Control. (4) Lecture,
four hours; discussion, one hour; outside study, seven
hours. Requisites: courses 100, 101C, 102B, 106, 107,
115. Principles of dynamics modeling and startup
behavior of chemical engineering processes. Chemical
process control elements. Design and applications of
chemical process control and instrumentation. Letter
grading.
110. Intermediate Engineering Thermodynamics. (4)
Lecture, four hours; discussion, one hour; outside study,
seven hours. Requisites: Computer Science 31.
Corequisite: course 101A. Use of previous-
literally learned concepts of biophysical chemistry, thermo-
dynamics, transport phenomena, and reaction kinetics
develop tools needed for technical design and econ-
omics for bioprocesses. May be concurrently
scheduled with course CM215. Letter grading.
C115. Bioseparations and Bioprocess Engineering. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisites: course 101C. Separation strategies, unit operations, and economic factors used to design processes for isolating and purifying materials like whole cells, enzymes, food additives, drugs, and other products of biological reactors. Concurrently scheduled with course CM225. Letter grading.

C127. Synthetic Biology for Biofuels. (4) Lecture, four hours; outside study, seven hours. Requisites: Chemistry 153A, Life Sciences 3. 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 function, bioinformatics, and systems biology. May be repeated for credit. Letter grading.

CM127. Lecture, four hours; discussion, one hour; outside study, seven hours. Requisites: course 101C. Bioengineering for undergraduate students taught on experimental or temporary basis, or Master of Engineering program students. Development of methods at molecular, cellular, and tissue levels for technical design and economic analysis of biological reactors. May be concurrently scheduled with course C115. Letter grading.

C129. Digital and Computational Techniques for Chemical Engineering. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. 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 selectivity. Examples provided from various fields/applications, including biotechnology, microelectronics, chemical-process sensors, and biomedical devices. Concurrently scheduled with course C212. Letter grading.

C130. Advanced Process Control. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisites: Principles of chemical engineering and engineering applications. Presentation of role of control in chemical process industries 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 function, bioinformatics, and systems biology. May be repeated for credit. Letter grading.

C135. Advanced Process Control. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisites: course 101C. Technology of particle/gas systems with applications to gas cleaning, commercial production of fine particles, and catalysis. Transport and deposition, optical properties, experimental methods, dynamics and control of particle formation processes. Concurrently scheduled with course C240. Letter grading.


C145. Molecular Biotechnology for Engineers. (4) (Same as Biomedical Engineering CM145.) Lecture, four hours; discussion, one hour; outside study, eight hours. Select 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, isolation of human genes, gene therapy, and stem cell engineering. Concurrently scheduled with course CM245. 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 for credit with topic or instructor change. Letter grading.

C192. Advanced Process Control. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisites: Principles of chemical engineering and engineering applications. Presentation of role of control in chemical process industries 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 function, bioinformatics, and systems biology. May be repeated for credit. Letter grading.

190. Directed Research in Chemical Engineering. (2 to 8) Tutorial, to be arranged. Limited to juniors/seniors. May be repeated for credit with topic or instructor change. Letter grading.
sign of products for meeting environmental objectives; lifecycle inventories; lifecycle impact assessment; design for end-of-life; design for weight minimization, computer-aided design tools, materials selection methods. Letter grading.

224. Cell Material Interactions. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisites: Chemistry CM135, Life Sciences 2. Introduction to design and synthesis of biomaterials for regenerative medicine, in vitro cell culture, and drug delivery. Biological principles of cellular microenvironment and design of extracellular matrix analogs using biological and engineering principles. Biomaterials for growth factor, and DNA and siRNA delivery as therapeutics and to facilitate tissue regeneration. Use of stem cells in tissue engineering. Concurrently scheduled with course C124. Letter grading.

CM225. Bioseparations and Bioprocess Engineering. (4) (Same as Biomedical Engineering M225.) Lecture, four hours; discussion, one hour; outside study, seven hours. Corequisite: course 101C. Separation strategies, unit operations, and economic factors used to design processes for isolating and purifying materials. Applications to pharmaceuticals, food and beverages, and 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. Engineering microorganisms. Design of microorganisms for the production of biofuels, bio-based products, and other 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, enzyme kinetics, and feedback and biosynthesis. Use of systems modeling for metabolic networks to design microorganisms for energy applications. Concurrently scheduled with course CM127. S/U or letter grading.


231. Molecular Dynamics. (4) Lecture, four hours; outside study, eight hours. Requisite: course 106 or 110. Analytical mechanics; molecular modeling: Molecular-beam sampling of reactive mixtures in combustion chambers or gas jets. Molecular-beam studies of gas-surface interactions, including energy accommodation and heterogeneous reactions. Applications to air pollution control and to catalysis. Letter grading.

232. Combustion Processes. (4) Lecture, four hours; outside study, eight hours. Requisite: course 106, 200, or Mechanical and Aerospace Engineering C132. (Same as Chemistry 232A.) Lecture, four hours; laboratory, eight hours. Requisites: Chemistry CM121, CM123. SAU 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, operation, and analysis of plasma and ion-beam systems. Reactors used in etching, deposition, oxidation, and cleaning of materials. Examination of atomic, molecular, and ionic phenomena involved in plasma and ion-beam processing of semiconductors, etc. Letter grading.

235. 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 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 time-varying, tracking, control, and (6) introduction to control of distributed parameter systems. Concurrently scheduled with course C135. Letter grading.

236. Chemical Vapor Deposition. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Chemical vapor deposition is widely used to deposit thin films that comprise microelectronic devices. Topics include reactor design, transport phenomena, catalysis, chemical reaction engineering, and composition of deposited films, and relationship between processing conditions and film properties. Letter grading.


CM245. Molecular Biotechnology for Engineers. (4) (Same as Biomedical Engineering CM245.) Lecture, four hours; discussion, one hour; outside study, eight hours. 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, molecular research tools, manipulation of gene expression, directed mutagenesis and protein engineering, synthesis of biotechnology and biomedical materials and devices. Letter grading.


260. Non-Newtonian Fluid Mechanics. (4) Lecture, four hours; outside study, eight hours. Requisite: course 108B. 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, microchemical kinetic, transition state theory, and statistical analysis. Examination of chemical 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, eight hours. Requisite: Electrical Engineering 141 or Mechanical and Aerospace Engineering 171A. Seminar on recent research in semiconductor materials and devices. Letter grading.


283C. Analysis and Control of Infinite Dimensional Systems. (4) Lecture, four hours; laboratory, 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 linear and stability theory (basic results on Banach and Hilbert spaces, semigroup theory, convergence theory in function spaces), (2) nonlinear model reduction (linear and nonlinear Galerkin method, proper orthogonal decomposition), (3) nonlinear 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: Letter grading.

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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-298Z. 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. Limited to graduate chemical engineering students. Seminars by leading academic and industrial chemical engineers on development or application of recent technological advances in discipline. 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.

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. 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.

495B. Teaching with Technology for Teaching Assistants. (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.

597A. Preparation for M.S. Comprehensive Examination. (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.

597B. Preparation for Ph.D. Preliminary Examinations. (2 to 16) Seminar, two hours. Limited to graduate chemical engineering students. Supervised investigation of advanced technical problems. S/U grading.

597C. Preparation for Ph.D. Oral Qualifying Examination. (2 to 16) Tutorial, to be arranged. Limited to graduate chemical engineering students. Preparation for oral qualifying examination, including preliminary research on dissertation. S/U grading.

598. Research for and Preparation of M.S. Thesis. (2 to 12) Tutorial, to be arranged. Limited to graduate chemical engineering students. Supervised independent research for M.S. candidates, including thesis prospectus. S/U grading.

599. Research for and Preparation of Ph.D. Dissertation. (2 to 16) Tutorial, to be arranged. Limited to graduate chemical engineering students. Usually taken after students have been advanced to candidacy. S/U grading.

**CHEMISTRY AND BIOCHEMISTRY**

**College of Letters and Science**

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Albert J. Courey, Ph.D., Chair

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Miguel A. Garcia-Garibay, Ph.D.
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Richard B. Kaner, Ph.D.
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Christopher J. Lee, Ph.D.
Alexander J. Levine, Ph.D.
Raphael D. Levine, Ph.D.
Joseph A. Loo, Ph.D.
Harold G. Martinson, Ph.D.
Thomas G. Mason, Ph.D.
Sabeea Merchant, Ph.D.
Daniel Neuhauser, Ph.D.
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Emil Reisler, Ph.D.
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Benjamin J. Schwartz, Ph.D.
Yi Tang, Ph.D.
Sarah H. Tolbert, Ph.D.
Joan S. Valentine, Ph.D.
John T. Wasson, Ph.D.
Paul S. Weiss, Ph.D. (Fred Kavli Professor of Nanosystems Sciences)
Richard L. Weiss, Ph.D.
Shimon Weiss, D.Sc. (Dean Willard Professor of Chemistry)
Omar M. Yaghi, Ph.D. (Irving and Jean Stone Endowed Professor of Physical Science)
Todd D. Yeates, Ph.D.
Jeffrey I. Zink, Ph.D.

**Professors Emeriti**

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Daniel E. Atkinson, Ph.D.
Kyle D. Bayes, Ph.D.
Paul D. Boyer, Ph.D.
Richard E. Dickerson, Ph.D.
Mostafa A. El-Sayed, Ph.D.
Clifford S. Garner, Ph.D., D.Sc.
Russell Hardwick, Ph.D.
M. Frederick Hawthorne, Ph.D. (University Professor)
Herbert D. Kaesz, Ph.D.
Charles M. Knobler, Ph.D.
Howard Reiss, Ph.D.
Verne N. Schumaker, Ph.D.
Robert L. Scott, Ph.D.
Roberts A. Smith, Ph.D.
J. Fraser Stoddart, Ph.D.
Charles E. Strouse, Ph.D.
Charles A. West, Ph.D.

**Associate Professors**

Deluy A. Baugh, Ph.D.
Paula L. Diaconescu, Ph.D.
Ohyun Kwon, Ph.D.
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Heather D. Maynard, Ph.D.
Craig A. Merlic, Ph.D.

**Assistant Professors**

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Louis S. Bouchard, Ph.D.
Xiangfeng Duan, Ph.D. (Howard Reiss Career Development Professor)
Neil K. Garg, Ph.D.
Margot E. Quintian, Ph.D. (Alexander and Renee Kolm Endowed Professor of Molecular Biology and Biophysics)
Jorge Torres, Ph.D. (John McGaughey Career Development Professor of Chemistry and Biochemistry)

**Senior Lecturer S.O.E.**

Arline A. Russell, Ph.D.

**Senior Lecturers**

Steven A. Hardinger, Ph.D.
Laurence Lavelle, Ph.D.

**Lecturers**

Maher M. Henary, Ph.D.
Eric R. Scoeri, Ph.D.

**Adjunct Professor**

R. Stanley Williams, Ph.D.

**Adjunct Assistant Professor**

Parag K. Mallick, Ph.D.

**Scope and Objectives**

Chemistry is concerned with the composition, structure, and properties of substances, the transformations of these substances into others by reactions, and the kinds of energy changes that accompany these reactions. The department is organized in four interrelated and overlapping subdisciplines that deal primarily with the chemistry of inorganic substances (inorganic chemistry), the chemistry of carbon compounds (organic chemistry), the chemistry of living systems (biochemistry), and the physical behavior of substances in relation to their structures and chemical properties (physical chemistry).

**Undergraduate Study**

**Admission**

Students entering UCLA directly from high school who declare a Chemistry or Biochemistry major at the time of application are automatically admitted to that major.

UCLA students who wish to enter one of the majors must have a minimum grade of C– in each of the preparation for the major courses completed and a combined grade-point average of at least 2.0 in those courses. Grades in any completed courses for the major must also average at least 2.0.

**Transfer Students**

Transfer applicants to the departmental majors with 90 or more units must complete the follow-
ing introductory courses prior to admission to UCLA: one year of general chemistry with laboratory for majors, one and one half years of calculus, and either one year of calculus-based physics with laboratory or one year of organic chemistry for majors. Biochemistry majors must also complete courses equivalent to Life Sciences 2 and 3; Chemistry majors should have completed the equivalent of Mathematics 32B.

Entering transfer students who have successfully completed a year course (including laboratory) in general college chemistry intended for science and engineering students should enter course 30A. Transfer students should consult the Undergraduate Advising Office in 4009 Young Hall for assistance with the articulation of transfer coursework.

Refer to the UCLA Transfer Admission Guide at http://www.admissions.ucla.edu/prospect/adm_tr.htm for up-to-date information regarding transfer selection for admission.

Advanced Placement in Chemistry
Students who have taken the Advanced Placement (AP) Chemistry Test and obtained a score of 4 or 5 receive 8 units of chemistry credit and may petition for chemistry and biochemistry equivalency, or may take course 20A at UCLA. If students receive a score of 3 on the AP Chemistry Test, they receive 8 units of chemistry credit but no course equivalency.

Credit Limitations
Students may not take or repeat a chemistry or biochemistry course for credit if it is a requisite for a more advanced course for which they already have credit. This applies in particular to the repetition of courses (e.g., if students wish to repeat Chemistry and Biochemistry 20A, they must do so before completing course 20B).

Undergraduate Majors
The department offers three majors: Chemistry (with concentrations in chemistry and physical chemistry), Biochemistry, and General Chemistry. The Chemistry and Biochemistry majors are designed to prepare students for graduate studies in each field, for entry into professional schools in the health sciences, and for careers in industries and businesses that depend on chemically and biochemically based technology. The General Chemistry major is intended for students who wish to acquire considerable chemical background in preparation for careers outside chemistry.

Each course used to fulfill any of the requirements for any of the departmental majors must be taken for a letter grade. Seminar courses, individual study courses, and research courses (e.g., 194, 199) may not be applied toward the requirements for the majors.

Requirements for the majors are outlined below. For additional information, contact the Undergraduate Advising Office in 4009 Young Hall.

Chemistry B.S.
The Chemistry major is for students who intend to pursue a career in chemistry.

Chemistry Concentration

Preparation for the Major
Required: Chemistry and Biochemistry 20A, 20B, 20L, 30A, 30AL, 30B, 30BL, 30C, 30CL; Mathematics 31A, 31B, 32A, 32B, 33B; Physics 1A, 1B, and 1C (or 1AH, 1BH, and 1CH), 4BL.

The Major
Required: Chemistry and Biochemistry 110A, either 110B or C113B, 113A, 114 (or 114H), either 136 or 144, 144A, 153A, 153L, 171, 172, and two other upper division or graduate courses in the department, including at least one additional laboratory course from 136, 144, 154, C174, 184, C185.

Physical Chemistry Concentration
The physical chemistry concentration is designed primarily for students who are interested in attending graduate school in physical chemistry/physics.

Preparation for the Major
Required: Chemistry and Biochemistry 20A, 20B, 20L, 30A, 30AL, 30B, 30BL; Mathematics 31A, 31B, 32A, 32B, 33B; Physics 1A, 1B, and 1C (or 1AH, 1BH, and 1CH), 4BL.

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 at http://www.chemistry.ucla.edu/pages/programs 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 B.S.
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, 20B, 20L, 30A, 30AL, 30B, 30BL, 30C, Life Sciences 2, 3, 4; Mathematics 31A, 31B, 32A (33A strongly recommended); Physics 1A, 1B, and 1C (or 1AH, 1BH, and 1CH), 4BL, or 6A, 6B, and 6C.

The Major
Required: Chemistry and Biochemistry 110A, 153A, 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 at http://www.chemistry.ucla.edu/pages/programs for a list of approved electives.

General Chemistry B.S.
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, 20B, 20L, 30A, 30AL, 30B, 30BL, 30C, 30CL; Mathematics 31A, 31B, 32A, 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, 153A, 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.

Honors Program
Admission
The honors program provides exceptional 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 consult the Undergraduate Advising Office, 4009 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 199, 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
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sponsors, and with the approval of the thesis by the departmental honors committee, students are awarded no honors, honors, or higher 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, http://www.gdnet.ucla.edu/gasasa/library/pgmrqintro.htm. 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 (M.S.), Candidate in Philosophy (C.Phil.), and Doctor of Philosophy (Ph.D.) degrees in Chemistry and Master of Science (M.S.), Candidate in Philosophy (C.Phil.), and Doctor of Philosophy (Ph.D.) degrees in Biochemistry and Molecular 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 nanomaterials and devices, collection of scientific data using those devices, analysis of data, and presentations of 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. Not open to students with credit for course 20A. Introduction to physical and general chemistry principles; atomic structure based on quantum mechanics; energy levels; trends in periodic table; chemical bonding (Lewis structures, VSEPR theory, hybridization, and molecular orbital theory); gaseous and aqueous equilibria; properties of inorganic and organic compounds, 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 corequisite: Mathematics 3A or 31A. 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 role as energy source; chemical kinetics, including catalysis, reaction mechanisms, and enzymes; coordination, stereochemistry, and name organic compounds; 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, one hour; laboratory, three hours. Enforced requisite: course 14B 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 kinetics 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 credit for course 30A. Continuing studies in structure of organic compounds with emphasis on biological applications. Resonance, stereochemistry, conjugation, and aromaticity; spectroscopy (NMR, IR, and 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. Enforced corequisite: course 14C. Laboratory experiences in carbon electrophilic substitution and addition reactions; functional groups and stereochemistry; structure and nomenclature of organic compounds; functional group identification; organic functional group reactions; and synthesis. 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. Enforced corequisite: course 14D. Development of functional group manipulations and reactions; introduction to organic synthesis and methodology; molecular basis of drug action, and organic chemistry of pharmaceuticals. P/NP or letter grading.

17. Chemical Principles. (No credit) Lecture, four hours; laboratory, two hours. Chemistry 17 displaces 4 units on student's Study List but yields no credit toward degree. Introduction to chemical principles: numbers, measurements, chemical calculations, gas laws, solutions, acids, bases, and salts, molecular structure, and nomenclature. Use of computer to solve problems; introduction to chemistry laboratory practice. No grading.

20A. Chemical Structure. (4) Lecture, three hours; discussion, one hour. Preparation: high school chemistry or equivalent background and three and one-half years of high school mathematics. Recommended: high school physics. First term of general chemistry. Survey of chemical quantum chemistry of atomic and molecular structure and bonding, molecular 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. Honors course parallel to course 20A or 20B, with grade of C– or better. Enforced corequisite: course 20A or 20AH, with grades of B+ or better, or 20AH with grade of B or better. Honors course parallel to course 20B. Letter grading.

20B. Chemical Energetics and Change. (4) Lecture, three hours; discussion, one hour. Enforced requisite: course 20A or 20AH, and Mathematics 31A, with grades of C– or better. Second term of general chemistry. Introduction to intermolecular forces, electronic structure, phase behavior, 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. Enforced requisite: course 20A and Mathematics 31A, with grades of B+ or better, or 20AH with grade of B or better. 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 20A. Modern techniques, volumetric techniques, and environmental analysis. Beer's law, applications for environmental analysis and material science. P/NP or letter grading.


30AH. Organic Chemistry I: Structure and Reactivity (Honors). (4) Lecture, three hours; discussion, one hour. Enforced requisite: course 20B or 20BH, with grades of B+ or better. Honors course parallel to course 30A. P/NP or letter grading.

30AL. General Chemistry Laboratory II. (4) Lecture, one hour; laboratory, six hours. Enforced requisite: course 20B (or 20AH) with grade of C– or better. Enforced corequisite: course 30A or 30AH. Qualitative and quantitative analysis of chemical reactions and compounds, kinetics, separations, and spectrophotometry. P/NP or letter grading.

30B. Organic Chemistry II: Reactivity, Synthesis, and Spectroscopy. (4) Lecture, three hours; discussion, one hour. Enforced requisite: course 30A or 30AH, with grade of C– or better. Enforced corequisite: course 30B. Modern techniques in organic chemistry, including mass spectrometry, infrared spectroscopy, and proton and carbon nuclear magnetic resonance spectroscopy. P/NP or letter grading.

30BL. Organic Chemistry Laboratory I. (3) Lecture, one hour; laboratory, four hours. Enforced requisite: courses 30A (or 30AH) and 30AL, with grades of C– or better. Enforced corequisite: course 30B. Basic experimental techniques in organic synthesis (distillation, extraction, crystallization, and performing reactions) and organic analytical chemistry (melting and boiling point, refractive index, chromatography, IR, NMR, GC). Single and multistep synthesis of known organic molecules on microscale level. P/NP or letter grading.

30C. Organic Chemistry III: Reactivity, Synthesis, and Biomolecules. (4) Lecture, three hours; discussion, one hour. Enforced requisite: course 30B with grade of C– or better. Enforced corequisite: course 30C. Basic experimental techniques in organic synthesis (distillation, extraction, crystallization, and performing reactions) and organic analytical chemistry (melting and boiling point, refractive index, chromatography, IR, NMR, GC). Single and multistep synthesis of known organic molecules on microscale level. P/NP or letter grading.

30CL. Organic Chemistry Laboratory II. (4) Lecture, two hours; laboratory, six hours. Enforced requisite: courses 30B and 30BL, with grades of C– or better. Enforced corequisite: course 30C. Modern tech-
niques in synthetic organic and analytical organic chemistry. Semi-preparative scale, multistep synthesis of organic and inorganic nanomaterials, including asymmetric catalysts. One- and two-dimensional multiaf nuclear NMR techniques. Written reports and propos-
als. P/NP or letter grading.

88A-88Z. Lower Division Seminars. (2) Seminar, two hours. Limited to freshmen/sophomores. General introduction to frontiers of molecular sciences or inten-
sive exploration of particular topic or theme. Consult 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) Tutorial, to be arranged. May be repeated for maximum of 8 units. P/NP or letter grading.

98X. PEERS Collaborative Learning Workshops for Life Sciences Majors. (1) Laboratory, three hours. Corequisite: associated undergraduate lecture course in chemistry and biochemistry for life sciences majors. Development of intuition and problem-solving skills in collaborative learning environment. May be repeated four times, but only 1 unit may be applied toward gradua-
tion. P/NP grading.

98XB. PEERS Collaborative Learning Workshops for Physical Sciences and Engineering Majors. (1) Laboratory, three hours. Corequisite: associated under-
graduate lecture course in chemistry and biochemistry for physical sciences and engineering majors. De-
velopment of intuition and problem-solving skills in col-
laborative learning environment. May be repeated four times, but only 1 unit may be applied toward gradua-
tion. P/NP grading.

Upper Division Courses

103. Environmental Chemistry. (4) Lecture, four hours; discussion, one hour. Requisites: courses 30B, 30BL, 110A, 153A (or 153AH), 153L. Chemical aspects of air and water pollution, solid waste disposal, energy resources, and pesticide effects. Chemical re-
actions in the context of chemical process-
es on environment. P/NP or letter grading.

M104. Environmental Chemistry Laboratory. (4) (Same as Atmospheric and Oceanic Sciences M140.) Lecture, two hours; laboratory, three hours. Requisite: course 20B. Laboratory experience for students who wish to pursue career in environmental science. Es-
ternal laboratory procedures to be performed in con-
text of timely environmental issues involving smog for-
mation, acid rain, and ozone depletion. Hands-on ex-
perience using scientific instruments and analytical techniques appropriate for environmental assessment. P/NP or letter grading.

C105. Introduction to Chemistry of Biology. (4) Lecture, three hours; discussion, one hour. Enforced requisite: course 153A with grade of C– or better. Intro-
duction to chemical biology. Topics include computa-
tional chemistry, chemical utility of synthesis in bio-
chemical research, peptidodynamics, designed reagents for cellular imaging, natural product biosynthesis, protein engineering and directed evolution, cell biology of metal-
ion imaging in cells, metal-containing drugs. Concurrently scheduled with course CM205A. P/NP or letter grading.

C108. Mass Spectrometry for Chemists and Bio-
chemists. (4) Lecture, laboratory, three hours. Requisite: course 153A. Introduction to princi-
ples and practice of organic and inorganic mass spec-
trometry. Topics include EI, CI, IPCMS, GC/MS, LC/ MS, ESI, MALDI, and applications of proteomics. Concurrently scheduled with course CM208. P/NP or letter grading.

110A. Physical Chemistry: Chemical Thermody-
namics. (4) Lecture, three hours; discussion, one hour. Requisites: courses 20B, Mathematics 32A or 3C for life sciences majors). Physics 1A, 1B, and 1C (may be taken concurrently), or 1A, 1B, and 1CH (may be taken concurrently), or 6A, 6B, and 6C; or be taken concurrently. Fundamentals of thermodynamics, chemical and phase equilibria, ther-
modynamics of solutions, electrochemistry. P/NP or letter grading.

110B. Physical Chemistry: Introduction to Statisti-
cal Mechanics and Kinetics. (4) Lecture, three hours; discussion, one hour; tutorial, one hour. Requi-
sites: courses 110A, 113A, Mathematics 32B. Kinetic theory of gases, principles of statistical mechanics, statistical thermodynamics, equilibrium structure and free energy, relaxation and transport phenomena, macroscopic chemical kinetics, molecular-level reac-
tions. P/NP or letter grading.

113A. Physical Chemistry: Introduction to Quan-
tum Mechanics. (4) Lecture, three hours; discussion, one hour; tutorial, one hour. Requisites: course 20B, Mathematics 32A, 32B, 32B, Physics 1A, 1B, and 1C, or 1A, 1B, and 1CH, and of analytic mechanics, quantum mechanics, introductory differential equations equivalent to Mathematics 134 or 135 or Physics 131 and of analytic mechanics equiva-
lent to Physics 105A. Course C115A or Physics 115B

M117. Structure, Patterns, and Polyhedra. (5) (Same as Honors Colloquium M108.) Lecture, four hours; laboratory, two hours. Exploration of new and their geometric underpinnings, with examples and ap-
lications from architecture (space frames, domes), bi-
ology (enzyme complexes, viruses), chemistry (sym-
metry, molecular cages), design (tiling), engineering (space filling), and physics (crystal structures) to effect working knowledge of symmetry, two-dimensional pat-
terns, and three-dimensional solids. P/NP or letter grading.

118. Colloidal Dynamics Laboratory. (4) Lecture, two hours; laboratory, eight hours. Requisites: courses 110A and 110B, with grades of B or better, or equiva-
 lent statistical mechanics courses from engineering, mathematics, or physics. P/NP or letter grading.

M120. Soft Matter Laboratory. (4) (Same as Physics M141.) Laboratory, four hours. Requisite: course C115B. P/NP or letter grading.

121. Special Topics in Physical Chemistry. (4) Lec-
ture, four hours. Requisite: course 110B. Recommend-
ed: course 113A. Topics of considerable research in-
terest at a level suitable for students who have com-
pleted junior-year courses in physical chemistry. P/ NP or letter grading.

C123A-C123B. Classical and Statistical Thermody-
namics. (4-4) Lecture, four hours; discussion, one hour. Requisite: course 110B or 156. Recommended: course 113A. Rigorous presentation of fundamentals of classical thermodynamics. Principles of statistical thermodynamics; probability, ensembles, partition function, independent molecules. Applications of classical and statistical thermodynam-
ics selected from diatomic and polyatomic gases, solid and fluid states, phase equilibria, chemical reaction, reaction rates, imperfect gas, nonelectrolyte and electrolyte solutions, surface phenomena, high polymers, gravita-
tion. May be concurrently scheduled and particles with courses C223A-C223B. P/NP or letter grading.

125. Computers in Chemistry. (4) Lecture, three hours. Preparation: working knowledge of Fortran IV or PL/1. Requisites: courses 110A, 110B, 113A. Discuss-
ses computer programming experience in either the computer programing, solution of differential equations, data acquisi-
tion, and instrumental control, and their applications to chemical problems in quantum mechanics, thermod-
namics, and kinetics. P/NP or letter grading.

C126A. Computational Methods for Chemists. (4) Lecture, four hours; laboratory, four hours. Preparation: programming experience in either BASIC, Fortran, C, C++, Java, or Pascal. Requisites: course 110A, Mathe-
matics 33B. Theoretical, numerical, and programming tools for constructing new chemical applications, in-
cluding simple force fields and resulting statistical me-
chanics for simple molecules, simple ab-initio methods for organic molecules and nanotubes, and classical dy-
amics and spectroscopy. Concurrently scheduled with course C228A. P/NP or letter grading.

C212. Dynamic Biochemistry. (4) (Same as Chemical Engineering CM127.) Lecture, four hours; discussion, one hour. Requisites: course 153A, Life Sciences 3. Engineering microorganisms for complex phenomena; common gold standard approaches to engineering and synthetic biology. Production of advanced biofuels involves designing and constructing novel metabolic networks in many cells. Such efforts require profound under-
standing of both chemical biology, protein structure, and biologi-
cal regulations and are aided by tools in bioinformatics, systems biology, and molecular biology. Fundamentals of metabolic biochemistry, protein structure and func-
tion, and bioinformatics. Using existing metabolic networks to design microorganisms for ener-
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: course 110A. Basic physical, chemical, and biological principles in bioinformatics; materials and strategies for top-down and bottom-up fabrication of ordered biologically derived molecules, characterization of biomaterials 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. Requisites: courses 30C and 30CL (may be taken concurrently), 110B, and 113A, with grades of C– or better. Laboratory course in organic reactions. Acidity and acidity correlation; linear free energy relationships; isotope effects. Molecular orbital theory; photochemistry; pericyclic reactions. May be concurrently scheduled with course C245. 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, 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 stoichiometric and catalytic methods for carbon-carbon bond formation. Laboratory methods of synthetic organic chemistry, including reaction 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; computer laboratory, one hour. Requisites: courses 110A, 113A. Applications of quantum mechanical concepts and methods to understand and predict organic structures and reactivities. Computational modeling methods, with laboratory experience with foron-field and quantum mechanical computer calculations. Concurrently scheduled with course C245. P/NP or letter grading.

153A. Biochemistry: Introduction to Structure, Enzymes, and Metabolism (Honors). (4) Lecture, three hours; discussion, one hour; tutorial, one hour. Requisite: course 14D or 30B, with grade of C– or better. Recommended: Life Sciences 2, 3. Structure of proteins, carbohydrates, and lipids; enzymes; analysis and principles of metabolism, 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. Requisite: course 153A or 153AH, Life Sciences 2, 3. Nucleotide metabolism; DNA replication; transcription and translation; metabolic pathways; energy levels, spectroscopy, and bonding; topics from structural, computational, and chemical methods of biochemistry of plant biochemistry. P/NP or letter grading.

C159A. Mechanisms in Regulation of Transcription I. (2) First five weeks. Lecture, four hours. Requisites: courses 153B, 153AH, 153BH, or 153L, with grades of C– or better. Recommended: course 156. Two to three major laboratory projects using biochemical laboratory techniques to investigate contemporary problems in biochemistry. Topics include transcription activation, molecular basis of DNA-protein interactions, chromatin structure, regulation of transcription, and initiation of transcription. Experiments entail characterization of function of proteins, nucleic acids, and lipids involved in these processes. P/NP or letter grading.

156. Physical Biochemistry. (4) Lecture, four hours; discussion, one hour; laboratory, four hours. Enforced requisites: courses 110A, 113A. Biochemical kinetics; solution thermodynamics of biochemical systems; multiple equilibria; hydrodynamics; energy levels, spectroscopy, and bonding; topics from structural, computational, and chemical methods of biochemistry of plant biochemistry. P/NP or letter grading.

C159B. Mechanisms in Regulation of Transcription II. (2) Second five weeks. Lecture, four hours. Requisites: courses 153B, 154, Eukaryotic general transcriptional apparatus, promoter recognition; mechanisms of transcriptional activation and repression, including role of chromatin structure; transcriptional factors and their targets; signal transduction pathways; transcription factors in embryogenesis. Concurrently scheduled with course C259B. P/NP or letter grading.

CM160A. Introduction to Bioinformatics. (4) Same as Computer Science CM121.) Lecture, three hours; discussion, one hour. Enforced requisites: Biostatistics 100A or 110A or Mathematics 170A or Statistics 100A or 110A, and Computer Science 180 or Program in Computing 60 with grade of C– or better. Introduction to bioinformatics and methodologies, with emphasis on concepts and inventing new bioinformatic methods. Focus on sequence analysis and alignment algorithms. Concurrently scheduled with course CM250A. P/NP or letter grading.

CM160B. Algorithms in Bioinformatics and Systems Biology. (4) Formerly numbered C160B.) Lecture, four hours; laboratory, four hours. Enforced requisites: course CM160A or Computer Science CM121 with grade of C– or better. Recommended: Computer Science 32 or Program in Computing 60. Statistics 100A, 110A. Development and application of computational approaches to biological questions. Understanding of mechanisms for determining statistical significance of computational algorithms and development of foundation for innovative work in bioinformatics and systems biology. Concurrently scheduled with course CM260B. Letter grading.

C161A. Plant Biochemistry. (4) Lecture, three hours; discussion, two hours. Requisite: course 153C. Introduction to distinctive features of plant biochemistry. Topics include photosynthesis, nitrogen metabolism, plant cell wall metabolism, and secondary metabolism in response to stress. Concurrently scheduled with course C261A. P/NP or letter grading.

C164. Free Radicals in Biology and Medicine. (2 to 4) Lecture, three hours. Enforced requisites: courses 153A and either 153B or 153C, with grades of C– or better. Biochemical reactivity of oxygen, its role in mitochondrial metabolism, neurodegenerative diseases, apoptosis, and aging. Discussion of radical reactions, how they are harnessed to achieve enzyme catalysis, and how free radicals contribute to or regulate essential biological processes. These same reactions “run amok” under certain types of stress and can contribute to wide variety of diseases, including neurodegenerative diseases (e.g., Huntington’s, Parkinson’s, and Alzheimer’s diseases), mitochondrial diseases, atherosclerosis, and aging. Concurrently scheduled with course C264. P/NP or letter grading.

C165. Metabolic Control by Protein Modification. (4) Lecture, three hours; discussion, one hour. Requisites: courses 153A, 153B, 153C. Biochemical basis of controlling metabolic pathways by posttranslational modifications of proteins, including and literature and methylation reactions. Concurrently scheduled with course C265. Letter grading.

CM170. Biochemistry and Molecular Biology of Photosynthesis. (4) Lecture, four hours; discussion, two hours. Requisites: courses 153B, 153AH, 153BH, with grades of C– or better. Systematic approach to modern inorganic chemistry, structure and bonding of inorganic molecules and solids, structural principles, vibrational spectra of complexes, electronic structure and ligand-field theories; mechanisms of inorganic reactions, bonding and spectroscopy of organometallic compounds, transition metals in catalysis and biology. P/NP or letter grading.

C174. Inorganic and Metalorganic Laboratory Methods. (5) Lecture, two hours; laboratory, eight hours. Enforced requisites: courses 30CL and 172, with grades of C– or better. Synthesis of inorganic compounds, including air-sensitive materials; Schlenk techniques; chromatographic and ion exchange methods; instrumental analysis and chromatographic applications. Concurrently scheduled with course C274. P/NP or letter grading.

C175. Inorganic Reaction Mechanisms. (4) Lecture, three hours; review; Computer Science 110A, 110B, 113A, and 172, with grades of C– or better. Survey of inorganic reactions; mechanism principles; electronic structure of metal ions; transition-metal coordination chemistry; inner- and outer-sphere mechanisms; bioinorganic chemistry and bioinorganic reactions; mechanisms of inorganic species. Concurrently scheduled with course C275. P/NP or letter grading.

C176. Group Theory and Applications to Inorganic Chemistry. (4) Lecture, three hours; discussion, one hour. Requisites: courses 113A and 172, with grades of C– or better. Group theoretical methods; molecular
orbital theory; ligand-field theory; electronic spectroscopy; vibrational spectroscopy. May be concurrently scheduled with course C276A. P/NP or letter grading.

C179. Biological Inorganic Chemistry. (4) Lecture, three hours. Requisites: courses 153A (or 153AH), 171. Role of metal ions in biology. Topics include interactions of metal ions with proteins, nucleic acids, and other biochemical molecules. Characteristics of metal transport and storage; introduction to metalloenzymes; metalloproteins in electron transfer, respiration, and photosynthesis; metals in medicine. Concurrently scheduled with course C290. P/NP or letter grading.


C181. Polymer Chemistry. (4) Lecture, three hours; discussion, one hour. Requisites: courses 30B, 110A. Synthesis of organic and inorganic macromolecules, thermodynamic and statistical mechanical descriptions of unique polymer structures, polymers of characteristic formation methods, and special topics such as conductive and biomedical polymers and polymeric reagents in synthesis. Concurrently scheduled with course C281. P/NP or letter grading.

184. Chemical Instrumentation. (5) Lecture, two hours; laboratory, eight hours. Enforced requisites: courses 30CL and 110A, with grades of C– or better. Theory and practice of instrumental techniques of chemical and structural analysis, including atomic absorption spectroscopy, gas chromatography, mass spectrometry, nuclear magnetic resonance, polarography, X-ray fluorescence, and other modern methods. P/NP or letter grading.


192A-192B. Undergraduate Practicum in Chemistry and Biochemistry. (4-4) Lecture, one hour; laboratory, two hours. Enforced requisite: courses UC LEADS and M2 or C115A. Influencing careers in secondary science chemistry teaching. Introduces potential careers in secondary science chemistry teaching. Complements service learning California Teach science courses that involve teaching field experiences in middle school and high school classrooms, and written and oral presentations of research or research papers selected from current literature. May be repeated for credit. Letter grading.

193. Journal Club Seminars: UC LEADS and MARC. (2) Seminar, three hours. Designed for juniors/seniors in undergraduate research training programs such as UC LEADS and MARC or those with strong commitment to pursue graduate studies in natural sciences, engineering, or mathematics. Weekly reading and oral presentations of research or research papers selected from current literature. May be repeated for credit. Letter grading.

194. Research Group Seminars: Chemistry and Biochemistry. (1) Seminar, three hours. Designed for undergraduate students who are part of research groups. Advanced study and analysis of current topics in physical, organic, inorganic, and biochemistry. Discussion of current research and literature in research specialty of faculty member teaching course. May be repeated for credit. P/NP grading.

196A. Research Apprenticeship in Chemistry and Biochemistry. (2 to 4) Tutorial, three hours per week per unit. Enforced requisite: course 196A (8 units). Limited to seniors/juniors. 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 8 units. Individual contract required. P/NP grading.

196B. Research Apprenticeship in Chemistry and Biochemistry. (2 to 4) Tutorial, three hours per week per unit. Enforced requisite: course 196A (8 units). Limited to juniors/seniors. 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.

199. Directed Research in Chemistry and Biochemistry. (2 to 4) Tutorial, three hours per week per unit. Enforced requisite: course 196A (8 units). Limited to juniors/seniors. Supervised individual research under the guidance of faculty mentor. Credit may be repeated for maximum of 12 units. Individual contract required. P/NP or letter grading.

201. Scientific Proposal Writing. (2) Lecture, three hours. Designed for chemistry and molecular biology students. How to write scientific proposals to be submitted to funding agencies. How to develop curricula vitae, put together grant proposals, and critique proposals. Letter grading.

M202. Bioinformatics Interdisciplinary Research Seminar. (4) (Formerly numbered 202.) (Same as Biinformatics M202.) Seminar, two hours; discussion, two hours. Concrete examples of how biological questions about genomics data map to and are solved by methodologies from other disciplines, including statistics, computer science, and mathematics. May be repeated for credit. S/U grading.

203A. Research Integrity and Ethics in Cellular and Molecular Biology Research. (2) Lecture, two hours. Data analysis and management, statistical methods, use of antibody and kit reagents, figure preparation, authorship, mentoring, human subjects protection, animal subject protection, and conflict of interest. May be repeated for credit. S/U grading.

203B. Ethics in Chemical Research. (2) Seminar, one hour. Discussion of ethics in graduate education, teaching, and chemical research, including issues such as conflicts of interest, plagiarism, intellectual property, sexual harassment, and other topics related to ethical conduct of research. S/U grading.

203C. Research Integrity 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 grading.

204. Student Research Seminar. (2) Lecture, three hours; discussion, one hour. For upper division students under guidance of faculty mentor. Credit is given for UCLA program Course C215A-C215B. Quantum Chemistry: Methods. (4-4) Lecture, four hours; discussion, one hour. Requisite or corequisite: course C215A. Topics in quantum chemistry. May be concurrently scheduled with course C215B. P/NP or letter grading.


206. Chemistry of Biology Seminar. (2) Seminar, two hours. Limited to graduate students. Current research topics at interface of chemistry and biology. May be repeated for credit. S/U grading.

207. Mass Spectrometry. (4) Lecture, 12 hours; discussion, 1 hour. May be repeated for credit. S/U grading.

208. Mass Spectrometry for Chemists and Biochemists. (2) Lecture, one hour; laboratory, four hours. Requisites: course 153A. Introduction to principal concepts in mass spectrometry. Topics include EI, CI, ICPMS, GC/MS, LC/MS, ESI, MALDI, MS/MS protein identification, and pharmacokinetics. Concurrently scheduled with course C108. S/U or letter grading.

210. Scientific Glassblowing. (1) Laboratory, one hour. Instruction in safe handling and manipulation of scientific glassware. Introduction to basic glassblowing techniques such as bending, annealing, and fire-polishing of glass. Proper cutting of glass and repairing of cracks. S/C grading.

C213B. Physical Chemistry: Molecular Spectroscopy. (4) Lecture, three hours; discussion, one hour; tutorial, one hour. Requisite: course 113A. Interaction of radiation with matter, microwave spectroscopy, infrared and Raman spectroscopy, vibrations in polyatomic molecules, the electromagnetic spectrum, and resonance spectroscopy. Concurrently scheduled with course C113B. Independent study project required of graduate students. S/U or letter grading.


218. Physical Chemistry Student Seminar. (2) Seminar, three hours; outside speakers, postdoctoral fellows, and graduate students. May be repeated for credit. S/U grading.
219A-219Z. Seminars: Research in Physical Chemistry. (2 each) Seminar, three hours. Advanced study and analysis of current topics in physical chemistry. Discussion of current research and literature in research specialty of faculty member teaching course. S/U grading.

219E. Dynamics of Molecule-Molecule and Molecule-Surface Surface Interactions. (4) Lecture, three hours; discussion, one hour. Requisites: courses 110B and 113A. Emphasis on regents useful in asymmetric induction and stereoselective synthesis of complex molecules. S/U or letter grading.

219I. Kinetic, Thermodynamic, and Interfacial Effects in Materials. (4) Lecture, three hours; discussion, one hour. Requisites: course 110B or 113A. Basic physical, chemical, and engineering concepts and methods to understand and predict thermodynamic and kinetic behavior at interfaces.

219J. Chemistry and Biophysics of Interfaces. (4) Lecture, three hours; discussion, one hour. Requisites: courses 110B and 113A. Molecular and quantum mechanical models of phase equilibria, electric and magnetic effects, ortho-para hydrogen, chemical equilibria, reaction rates, imperfect gas, nonelectrolyte and electrolyte solutions, surface phenomena, high polymers, gravitation. May be concurrently scheduled with courses C123A, C123B. S/U or letter grading.

219K. Statistical Mechanics of Soft Matter. (4) Lecture, three hours; discussion, one hour. Requisites: courses 110B and 113A. Molecular mechanics and statistical mechanics for surfaces, high polymers, gravitation. May be concurrently scheduled with courses C123A, C123B. S/U or letter grading.

219L. Supramolecular and Macromolecular Chemistry. (4) Lecture, three hours; discussion, one hour. Requisites: courses 110B and 113A. Molecular mechanics and statistical mechanics for surfaces, high polymers, gravitation. May be concurrently scheduled with courses C123A, C123B. S/U or letter grading.

219M. Cosmochemistry. (4) Lecture, three hours; discussion, one hour. Requisites: course 219A. Theoretical, numerical, and programming tools for constructing new chemical applications, including simple force fields and resulting statistical mechanics for simple molecules, simple ab-initio methods for organic molecules, and nanotubes, and classical dynamics and spectroscopy. Concurrently scheduled with course C126A. S/U or letter grading.


219R. Nonequilibrium Statistical Mechanics and Nonequilibrium Thermodynamics. (4) Lecture, three hours; discussion, one hour. Requisites: Mathematics 3C, Physics 6C. Selected topics from principles of biological structure: structures of globular proteins and RNAs; structures of fibrous proteins, nucleic acids, and polysaccharides; harmonic analysis and Fourier transforms; electron, nuclear, and X-ray diffraction; optical and computer filtering; three-dimensional reconstruction. S/U or letter grading.

228. Chemical Physics Seminar. (2) Seminar, two hours. Seminars presented by staff, outside speakers, postdoctoral fellows, and graduate students. May be repeated for credit. S/U or letter grading.

229. Introduction to Physical Chemistry Research. (2) Lecture, 90 minutes. Designed primarily for entering graduate physical chemistry students. S/U grading.


235F. Synthetic Methods and Synthesis of Natural Products. (4) Lecture, three hours; discussion, one hour. Requisites: courses C243A, C243B, or Physics 215A. Fundamentals of nonequilibrium thermodynamics and statistical mechanics applied to molecular biophysics. S/U or letter grading.

235G. Organic Colloquium. (4) Lecture, three hours; discussion, two hours. Concurrently scheduled with course C140. S/U or letter grading.

235H. Organic Chemistry: Mechanism and Structure. (4) Lecture, three hours; discussion, one hour. Requisite: course C243A. Mechanisms of organic reactions; structure and detection of reactive intermediates. May be concurrently scheduled with course C143B. S/U or letter grading.


243A. Structure and Mechanism in Organic Chemistry. (4) Lecture, three hours; discussion, one hour. Requisites: courses 30C and 30CL (may be taken concurrently), 110B, and 113A, with grades of C– or better. Mechanisms of organic reactions. Acidity and acid catalysis; linear free energy relationships; isotope effects. Molecular orbital theory; photochemistry; peri- cyclic reactions. May be concurrently scheduled with course C143A. S/U or letter grading.

244A. Organic Synthesis: Methodology and Stereochemistry. (4) Lecture, three hours; discussion, one hour. Modern synthetic reactions and transformations involving organic substrates. Special emphasis on regents useful in asymmetric induction and stereoselective synthesis of structurally complex target molecules. S/U or letter grading.


247. Organic Colloquium. (2) Seminar, two hours. Seminars in organic chemistry and related areas presented by staff, outside speakers, postdoctoral fellows, and graduate students. May be repeated for credit. S/U grading.

248. Organic Chemistry Student Seminar. (2) Seminar, two hours. Seminars presented by staff, outside speakers, postdoctoral fellows, and graduate students. May be repeated for credit. S/U grading.


25A-251Z. Advanced Topics in Biochemistry. (2 each) Lecture, two to four hours. Each course encom-
passes one recognized specialty in biochemistry, gen-
erally taught by faculty members whose research inter-
ests embrace that specialty. S/U or letter grading.

M252. Seminar: Advanced Methods in Computa-
tional Biology. (2) (Same as Bioinformatics M252 and 
Human Genetics M252.) Seminar, one hour; discus-
sion, one hour. Designed for advanced graduate stu-
dents. Examination of computational methodology in 
bioinformatics and computational biology through pre-
sentation of current research literature. How to select and 
apply methods from computational and mathemat-
ical disciplines to problems in bioinformatics and com-
putational biology; development of novel methodolo-
gies. S/U or letter grading.

(2 each) Seminar, three hours. Advanced study and 
analysis of current topics in biochemistry. Discussion 
of current research literature; research in literature 
related to faculty member teaching course. S/U grading.

25A. Biochemistry of Plasma Proteins. 
25B. Biochemistry of Protein Function. 
25C. Biochemistry and Molecular Genetics of Fungi. 
25D. Transcriptional Control Mechanisms in Drosoph-
ilia Embryogenesis. 
25E. Current Topics in Prokaryotic Development. 
25F. Nucleic Acid Structure Determination by NMR. 
25G. Basic Mechanisms of Promoter Activation. 
25I. Biochemistry and Molecular Biology of Chla-
mydiosomes. 
25J. Literature of Structural Biology. 
25K. Mechanism and Regulation of Transcription Ter-
mination in Eukaryotic Organisms. 
25L. Advanced Topics in Structural Biology. 
25M. Membrane Biophysics. 
25N. Analysis of Protein Structure. 
25O. Biochemistry and Function of Ubiquinone in Yeast and Higher Eukaryotes. 
25P. Mitochondrial Biogenesis and Link to Disease. 
25Q. Proteomics and Mass Spectrometry. 
25R. Cytoskeletal Dynamics during Drosophila Oo-
genesis. 
25S. Microtubule-Based Structures and Human Dis-
ease. 
25T. Physical Chemistry of Biological Macromole-
cules. (4) Lecture, one hour; discussion, one hour; 
laboratory, four hours. Requisite: course 153A. Theory 
of hydrodynamic, thermodynamic, and optical tech-
niques used to study structure and function of biologi-
cal macromolecules. S/U or letter grading.

25A-251Z. Advanced Topics in Biochemistry and Mole-
cular Biology. (2) Lecture, two hours. Critical analysis 
of experimental design and methods in biochemistry 
and molecular biology. In-depth analysis of literature in 
one or more areas of current research. May be repeat-
ed for credit. S/U or letter grading.

C259A. Mechanisms in Regulation of Transcrip-
tion I. (2) First five weeks. Lecture, two to four hours. 
Mechanisms that control transcription in bacteria. Repression 
and activation at promoters. Sigma factors and polymerase 
binding proteins. Signal transduction pathways in tran-
scription. Discussion of current research literature. 
Concurrently scheduled with course C159A. S/U or letter grading.

C259B. Mechanisms in Regulation of Transcrip-
tion II. (2) Second five weeks. Lecture, four hours. Eukary-
ocistic gene expression. Transcription factors and 
transcriptional regulatory mechanisms. DNA binding; 
epigenetic changes; histone modification; repressor 
protein recognition; mechanisms of transcription-
tional activation and repression, including role of chro-
matin structure; transcription factors as targets of 
signal transduction pathways; transcription factors in 
embryogenesis. Concurrently scheduled with course 
C159B. S/U or letter grading.

CM260A. Introduction to Bioinformatics. (4) (Same as Bioinformatics M260A; Computer Science CM261A 
and Human Genetics M260A.) Lecture, three hours; 
discussion, one hour. Enforced requisites: Biostatistics 
100A or 110A or Mathematics 170A or Statistics 100A 
or 110A, and Computer Science 180 or Program in Compu-
ter Science 60 with grade of C– or better. Recommended: Computer Scie-
ence 100A. In-depth introduction to bioinformatics and methodologies, with emphasis on 
concepts and inventing new bioinformatic methods. Focus on sequence analysis and alignment 
algorithms. Concurrently scheduled with course CM160A. S/U or letter grading.

CM260B. Algorithms in Bioinformatics and Sys-
tems Biology. (4) (Formerly numbered C260B.) (Same as Computer Science CM222.) Lecture, four 
hours; laboratory, four hours. Enforced requisites: course CM260A or Computer Science CM221 with 
grade of C– or better. Recommended: Computer Scie-
ence 100A. Development and application of computational 
approaches to biological questions. Understanding of 
mechanisms for determining statistical significance of computationally derived results. Development of 
foundation for innovative work in bioinformatics and sys-

CM260L. Advanced Bioinformatics Computational 
Laboratory. (2) (Lecture) Enforced requisites: course 
CM260A. Corequisite: course CM260B. Development and application of computational 
approaches to ask and answer biological questions by implementing various bioinformatics 
and systems biology algorithms. Advantages and disadvantages of different algorithmic methods for 
studying biological questions and preliminary understanding of how to 
compute statistical significance of results. Develop-
ment of conceptual understanding of implementation of 
bioinformatics algorithms and foundation for how to 
do innovative work in these fields. Experience in ob-
serving impact of computational complexity of algo-
rithms in computing solutions. S/U or letter grading.

CM261A. Plant Biochemistry. (4) Lecture, three hours; 
discussion, two hours. Requisite: course 153C. Intro-
duction to distinctive features of plant biochemistry. 
Topics include photosynthesis, nitrogen metabolism, 
plant cell wall metabolism, and secondary metabolism in 
relation to stress. Concurrently scheduled with course 
C161A. S/U or letter grading.

262. Biochemistry and Molecular Biology of Pro-
tein Translocation Systems. (3) Lecture, two hours; 
discussion, two hours. Requisites: courses 269A through 269D. Protein translocation into nucleus, mito-
chondrion, peroxisome, chloroplast, endoplasmic retic-
ulum, and protein export in bacteria. Letter grading.

M263. Metabolism and Its Regulation. (4) (Same as 
Biochemistry M263.) Lecture, three hours; 
Laboratory, five hours; discussion, two hours. 
Requisites: course 153A, 153B, 153C, 156. Three-dimensional 
structure of DNA and RNA. Sequence-specific recogni-
tion of DNA and RNA. RNA-catalyzed processes, 
including self-splicing and peptide bond formation. 
Letter grading.

269F. Mechanism and Regulation of Gene Expres-
sion. (2) Lecture, two hours; discussion, two hours. 
Requisites: courses 153A, 153B, 153C, 156. Mechanisms 
and regulation of protein-mediated catalysis. Proteomics and metabo-
lomics. Concepts in electron, proton, and energy trans-

269G. Nucleic Acid Structure and Catalysis. (2) 
Lecture, five hours; discussion, two hours. Requisites: 
courses 153A, 153B, 153C, 156. Three-dimensional 
structure of DNA and RNA. Sequence-specific recogni-
tion of DNA and RNA. RNA-catalyzed processes, 
including self-splicing and peptide bond formation. 
Letter grading.

269H. Metabolic Control by Protein Modification. 
(2 each) Lecture, two hours; discussion, two hours. 
Requisites: courses 153A, 153B, 153C, 156. Mechanisms 
and regulation of protein-modified catalysis. Proteomics and metabo-
lomics. Concepts in electron, proton, and energy trans-

269I. Issues in Chemical Education. 
272A. Chemistry of Materials. 
272B. Inorganic Chemistry. 
272C. Synthetic Organic Chemistry. 
272D. Organic Chemistry. 
272E. Introduction to Bioinformatics. (4) (Same as Bioinformatics M260A; Computer Science CM261A 
and Human Genetics M260A.) Lecture, three hours; 
discussion, one hour. Enforced requisites: Biostatistics 
100A or 110A or Mathematics 170A or Statistics 100A 
or 110A, and Computer Science 180 or Program in Compu-
ter Science 60 with grade of C– or better. Recommended: Computer Scie-
nce 100A. In-depth introduction to bioinformatics and methodologies, with emphasis on 
concepts and inventing new bioinformatic methods. Focus on sequence analysis and alignment 
algorithms. Concurrently scheduled with course CM160A. S/U or letter grading.

269J. Biocatalysis and Bioenergetics. (2) 
Lecture, five hours; discussion, two hours. Requisites: 
courses 153A, 153B, 153C, 156. Mechanisms and regulation of 
protein-mediated catalysis. Proteomics and metabo-
lomics. Concepts in electron, proton, and energy trans-

269K. Biochemistry and Molecular Biology of Pho-
tothrophic Apparatus. (2) Lecture, two hours; 
discussion, zero to two hours. Requisites: courses 
153A and 153B, or Life Sciences 3, and course 
153L. Recommended: courses 153C, 154, Life Sciences 
4. Light harvesting, electron transfer, carbon fixation, carbohydrate metabolism, 
pigment synthesis in chloroplasts and bacteria. As-
sembly of photosynthetic membranes and regulation of 
genes encoding those components. Emphasis on un-

271. Advanced Topics in Inorganic Chemistry. (2 to 
4) Lecture, two to four hours. Each offering encom-
passes one recognized specialty in inorganic chemis-
try, generally taught by faculty members whose re-
search 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 chem-
istry. Discussion of current research and literature in 
related specialty of faculty member teaching course. 
S/U grading.

272A. Chemistry of Materials. 
272B. Metallorganic, Inorganic Biomaterialorganic 
Chemistry. 
272C. Inorganic Spectroscopy. 
272D. Bioorganic Chemistry and Biology of Transi-
tion Metals and Oxygen. 
272E. Organometallic Synthesis and Chemical Vapor 
Deposition. 
272G. Issues in Chemical Education.
272L. Organometallic Chemistry.

272J. Reticulum Chemistry.


C274. Inorganic and Metalorganic Laboratory Methods. (Lecture, two hours; laboratory, eight hours. Enforced requisites: courses 30CL and 172, with grades of C– or better. Synthesis of inorganic complexes, including air-sensitive materials; Schlenk techniques; chromatographic and ion exchange methods; spectroscopic characterization and literature applications. Concurrently scheduled with course C174. S/U or letter grading.


C276A. Group Theory and Applications to Inorganic Chemistry. (Lecture, three hours; discussion, one hour. Requisites: courses 113A and 172, with grades of C– or better. Group theoretical methods; molecular orbital theory; ligand-field theory; electronic spectroscopy; vibrational spectroscopy. May be concurrently scheduled with course C176. S/U or letter grading.

C276B. Physical Methods in Inorganic Chemistry. (Lecture, four hours. Requisite: course C276A. Theory and applications of spectroscopic techniques, including magnetic resonance and vibrational and surface science methods, to inorganic compounds and materials. S/U or letter grading.

C277. Crystal Structure Analysis. (Lecture, three hours. Theory and practice of modern crystallography, with emphasis on practical experience in structure determination. Topics include crystallographic symmetry, scattering theory, data collection. Preparation: apprentice personnel, to be arranged with faculty member who supervises research of M.S. students and holds responsibility as teaching assistant, associate, or fellow. 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. Concurrently scheduled with course C185. Letter grading.

M370A. Integrated Science Instruction Methods. (4) Same as Earth 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. Concurrently scheduled with course C185. Letter grading.

M370B. Integrated Science Instruction Methods. (4) Same as Earth and Space Sciences M370B and Physics M370B. Lecture, two hours; discussion, one hour; laboratory, one hour. Requisite: course M370A or Earth 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.

376. Teaching Apprentice Practicum. (1 to 4) Seminars. 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. (Lecture, two hours; laboratory, two hours; discussion, one hour; discussion, one hour; laboratory, one hour. Requisite: course M370A or Earth and Space Sciences M370A or Physics M370A. Survey of safety practices and laboratory techniques in organic, inorganic, and physical chemistry and biochemistry. Topics include laser safety, cryogenic hazards, high- and low-pressure experimentation, gas and carcinogen handling, chemical spills, fire extinguishing, and chemical disposal. S/U grading.

495. Teaching College Chemistry. (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.

599. Research for and Preparation of Ph.D. Dissertation. (2 to 16) Tutorial, to be arranged. Each faculty member supervises research of Ph.D. students and holds leadership role in research group meetings, seminars, and discussions with students. May be repeated for credit. S/U or letter grading.

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Omar M. Yaghi, Ph.D. (Chemistry and Biochemistry)
Yang Yang, Ph.D. (Materials Science and Engineering)
Jeffrey L. Zink, Ph.D. (Chemistry and Biochemistry)

Scope and Objectives
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.

Undergraduate Study
Chemistry/Materials Science
B.S.

Preparation for the Major

Transfer Students
Transfer applicants to the Chemistry/Materials Science major with 90 or more units must com-
plete the following introductory courses prior to admission to UCLA: one year of general chemistry with laboratory for majors, one organic chemistry course, one and one half years of calculus, and one year of calculus-based physics with laboratory.

Transfer applicants to the organic materials concentration must complete a full year of organic chemistry with laboratory in addition to the other courses listed above.

Refer to the UCLA Transfer Admission Guide at http://www.admissions.ucla.edu/prospect/adm_tr.htm for up-to-date information regarding transfer selection for admission.

The Major

Required: Chemistry and Biochemistry 110A, 113A, 171, 172 or C180 or C181, C185, 4 units from 110B, 113B, 172, 174, 175, 176, C180, C181; Materials Science and Engineering 104, 109, 110L, 120, 121 or 120 or 150 or 160, 131, 8 units from 111, 121, 122, 123, 130, 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


The Major

Required: Chemistry and Biochemistry 110A, 113A, 136, 171, C185, 4 units from 110B, C113B, C143A, 144, 172, C174, C175, C176, C180, C181; Materials Science and Engineering 104, 109, 110L, 120, 121 or 120 or 150 or 160, 131, 8 units from 111, 121, 122, 131, 132, 160, 162, CM180; 7 laboratory units from Chemistry and Biochemistry 114, 184, Materials Science and Engineering 121L, 131L, 161L.

For further information, contact Denise Manton, Chemistry and Biochemistry, 4009 Young Hall, (310) 825-4660.

CÉSAR E. CHÁVEZ
DEPARTMENT OF CHICANA AND CHICANO STUDIES

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Rosina M. Becerra, Ph.D.
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Daniel G. Solórzano, Jr., Ph.D.
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José Luis Valenzuela, B.A.

Professor Emerita
Kris D. Gutiérrez, Ph.D.

Associate Professors
Eric Avila, Ph.D.
Leobardo F. Estrada, Ph.D.
Raul A. Hinojosa-Ojeda, Ph.D.
Maria Cristina Pons, Ph.D.
Ottó Santa Ana, Ph.D.

Assistant Professors
Lesly J. Abrego, Ph.D.
Maylei S. Blackwell, Ph.D.
David M. Hernández, Ph.D.
Robert Chao Romero, Ph.D.

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 Latinas/Latinos 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 Chicanas/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

Chicana and Chicano Studies B.A.

The B.A. program in Chicana and Chicano Studies is committed to the practice of different courses that provide a comparative perspective to Chicana and Chicano studies and/or a context of the field; one advanced seminar course from 100SL or another course by petition outside the department (related study includes courses that provide a comparative perspective to Chicana and Chicano communities 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: Chicana and Chicano Studies M110, 120, M124, M125, M126, 132, 143, M144, M147, 151, 152, 153, M145, M155, 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 by 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.

Capstone Option

Students wishing to engage in capstone experience in their senior year must enroll in one
capstone seminar (Chicana and Chicano Studies 191). Capstone seminars are taught by departmental core faculty members and engage students in weekly reading, writing, discussion, analysis, and peer review of capstone projects that culminate in a public oral presentation of each student’s work. A capstone project is an inquiry-based research paper, an expanded paper from a previous upper division course in the selected concentration, or a creative project developed in close consultation with a faculty mentor.

To enroll in capstone seminars, seniors must have completed all lower division preparation courses, the required theory course, and at least three courses in their primary concentration. It is expected that the resulting works demonstrate strong research and analytical skills, competence in interdisciplinary methodology, a mastery of basic knowledge in the field, including a foundation of race, class, gender, and sexuality epistemologies, and a broad understanding of the area of concentration. Capstone projects are archived and accessible through the departmental website.

Honors Program
The Chicana 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 Chicana 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 Chicana 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 eligible for 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
Chicana 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.

Chicana and Chicano Studies Minor
The Chicana 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 Chicana 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):
- Chicana and Chicano Studies 10A, 10B.

Required Upper Division Courses (20 units minimum)
- Chicana and Chicano Studies 101 and four elective courses (20 units minimum) selected from the approved list (available in the department office each term).

No more than one upper division course may be applied toward both this minor and a major or minor in another department or program.

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, http://www.gds.uc.edu/gasaa/library/pgmrqintro.htm. 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 Chicana and Chicano Studies offers Master of Arts (M.A.) and Doctor of Philosophy (Ph.D.) degrees in Chicana and Chicano Studies.

Chicana and Chicano Studies

Lower Division Courses
10A. Introduction to Chicana/Chicano Studies: History and Culture. (5) Lecture, three hours; discussion, one hour. Interdisciplinary survey of diverse historical experiences, cultural factors, and ethnic/racial paradigms, including indigenous, gender, sexuality, language, and borders, that help shape Chicana/Chicano identities. Emphasis on critical reading and writing skills. Letter grading.

10B. Introduction to Chicana/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.

88. Sophomore Seminars: Chicana and Chicano Studies. (2) Seminar, two hours. Limited to lower division students. Readings and discussions designed to introduce students to current research in Chicana/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 Chicana and Chicano Studies. (2) Seminar, two hours. Requisite: course 10A or 10B. Current topics and particular research methods in Chicana and Chicano studies through readings and oral assignments. May be repeated for credit. P/NP or letter grading.

98. Professional Schools Seminars. (2) Seminar, two hours. Limited to 20 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 Service Learning. (4) Seminar, two hours; field placement, eight hours. Limited to juniors/seniors. Service learning placement in community-based organization, labor union, or service-oriented nonprofit organization. Study of role that these organizations play in improvement and change of Chicana/Chicano communities. Students meet on regular basis with instructor and provide periodic reports of their experience. Individual contract with supervising faculty member required. Letter grading.


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 disentangling effects of race, gender, class, and immigrant status on Chicana/Chicano educational attainment 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 theater from its beginnings in legends and rituals of ancient Mexico to work of Luis Valdez (late 1960s). P/NP or letter grading.

M103D. Contemporary Chicano Theater: Beginnings of Chicano Theater Movement. (5) (Same as Theater 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.


104. Comedy and Culture: Your Humorous Life. (4) Lecture, four hours. How to mine unique humorous life adventures from students’ cultural identities and turn those distinct experiences into humorous literature. Students acquire skills to read their stories out loud, with emphasis on comedians and 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). Enforced requisite: English Composition 3 or 3H. Survey of Chicana/Chicano literature from poetry of Triple Alliance and Aztec Empire through end of Mexican Revolution (1920), including Aztec poets (lyrics, corridos, testimonios, folklores, novels, short stories, and drama) by writers such as Nezahualcóyotl (Hungry Coyote), Cazaba de Vacca, Lorenzo de Zavala, Maria Amparo Ruiz de Burton, Eusebio Chacón, Daniel Vélez, and Lorena Villegas de Magón. P/NP or letter grading.
M105B. Chicana/Chicano Literature from Mexican Revolution to el Movimiento, 1920 to 1970s. (Same as English M105B.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Survey of Chicana/Chicano literature from Mexican Revolution to el Movimiento, 1970s to Present. (5)

111. Chicana/Chicano and Latina/Latino Intellectual Traditions. (5) (Same as Film and Television M117.) Lectures/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 1908 and 1980. Examination of how social movement, working-class Chicano experience, and Hollywood genres interact to produce and 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 representation of Chicanos. Guest speakers include both pioneer and up-and-coming filmmakers. P/NP or letter grading.

114. Chicano in Film/Vídeo. (5) (Same as Film and Television M117.) Lectures, five hours; discussion, one hour. Focus on Chicana and Chicano experience. Like its U.S. counterpart, Mexican cinema has produced great variety of films that deal with Chicana and Chicano experience, with focus on themes of identity, ethnicity, gender, and socioeconomic, demographic, and political forces that shape low-income communities and analyze planning intervention strategies. Emphasis on community and economic development and environmental equity. Letter grading.

115. Cultural Aesthetics in Los Angeles. (4) (Same as Film and Television M115.) Lecture, three hours. Focus on Chicana and Chicano experience. Like its U.S. counterpart, Mexican cinema has produced great variety of films that deal with Chicana and Chicano experience, with focus on themes of identity, ethnicity, gender, and socioeconomic, demographic, and political forces that shape low-income communities and analyze planning intervention strategies. Emphasis on community and economic development and environmental equity. Letter grading.

116. Chicano/Latina/Latino Music in U.S. (5) (Same as Ethnomusicology M116.) Lecture, four hours; discussion, one hour. Focus on Chicano and Latina/Latino music. Survey of musical styles from traditional folkloric through pop music. Examination of the influence of Chicano/Latina/Latino music on American popular culture. P/NP or letter grading.

117. Chicana/Chicano Images in Mexican Film and Literature. (4) (Same as Film and Television M117.) Lecture, four hours; discussion, one hour. Focus on Chicana and Chicano experience. Like its U.S. counterpart, Mexican cinema has produced great variety of films that deal with Chicana and Chicano experience, with focus on themes of identity, ethnicity, gender, and socioeconomic, demographic, and political forces that shape low-income communities and analyze planning intervention strategies. Emphasis on community and economic development and environmental equity. Letter grading.

118. Student-Initiated Research and Outreach Initiatives in Higher Education. (4) (Same as Afro-American and African Diaspora Studies M117.) Lecture, four hours. Focus on Chicana and Chicano experience. Like its U.S. counterpart, Mexican cinema has produced great variety of films that deal with Chicana and Chicano experience, with focus on themes of identity, ethnicity, gender, and socioeconomic, demographic, and political forces that shape low-income communities and analyze planning intervention strategies. Emphasis on community and economic development and environmental equity. Letter grading.

119. Chicano/Latino Community Formation: Critical Perspectives and Oral Histories. (4) (Same as Chicana and Chicano Studies M123.) Lecture, four hours. Focus on Chicana and Chicano experience. Like its U.S. counterpart, Mexican cinema has produced great variety of films that deal with Chicana and Chicano experience, with focus on themes of identity, ethnicity, gender, and socioeconomic, demographic, and political forces that shape low-income communities and analyze planning intervention strategies. Emphasis on community and economic development and environmental equity. Letter grading.

120. Immigration and Chicano Community. (4) Lecture, three hours. Focus on Chicana and Chicano experience. Like its U.S. counterpart, Mexican cinema has produced great variety of films that deal with Chicana and Chicano experience, with focus on themes of identity, ethnicity, gender, and socioeconomic, demographic, and political forces that shape low-income communities and analyze planning intervention strategies. Emphasis on community and economic development and environmental equity. Letter grading.

122. Planning Issues in Latina/Latino Communities. (4) (Same as Labor and Workplace Studies M122 and Urban Planning M121.) Lecture, four hours. Focus on Chicana and Chicano experience. Like its U.S. counterpart, Mexican cinema has produced great variety of films that deal with Chicana and Chicano experience, with focus on themes of identity, ethnicity, gender, and socioeconomic, demographic, and political forces that shape low-income communities and analyze planning intervention strategies. Emphasis on community and economic development and environmental equity. Letter grading.

131. Barrio Popular Culture. (4) Lecture, three hours. Construction of model by which to organize study of Chicana/Chicano popular culture by focusing on barrio community. Examination of beliefs, myths, and values of Chicana/Chicano culture and representations in icons, heroes, legends, stereotypes, and popular art forms through literature, film, video, music, mass media, and oral history. Letter grading.

132. Border Consciousness. (4) Lecture, three hours. Investigation through history, popular culture, and media of Chicana and Chicano identity and belief systems produced by geographical and cultural space between Mexico and U.S. Special attention to border consciousness as site of conflict and resistance. Letter grading.


M135. Bilingual Writing Workshop. (4) Same as Women’s Studies M135C.) Seminar, four hours. Writing sample required on first day of class; access to course Web page mandatory; need not be bilingual to enroll. Technical instruction, analysis, and theoretical discussion of bilingual creative expression, with focus on specific genre (i.e., autobiography, poetry, fiction). Emphasis on memory, identity, gender, and sexuality. Central theme of bilingualism as politics and aesthetics. Peer critique of weekly writing assignments. Letter grading.

M139. Topics in Chicana/Chicano and/or Latin/Latino Literature. (4) Lecture as English M139.) Lecture, three or four hours. Enforced requisite: English Composition 3 or 3H. Variable specialized studies course in Chicana and/or Latin/Latino Literature. Topics include labor and literature; Chicana/Chicano visions of Los Angeles; immigration, migration, and exile; autobiography and historical change; Chicana/Chicano journalism; literary New Mexico; specific literary genre(s). May be repeated for credit with topic or instructor change. P/NP or letter grading.

141. Chicana and Latin American Women’s Narrative. (4) Lecture, four hours. Preparation: reading knowledge of Spanish (level 4). Analyses, comparisons, and discussions of narrative literature produced by U.S. Chicana writers and their Latin American counterparts in English and Spanish, with particular focus on how works group themselves by gender, ethnic, and class issues. 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 Maya peoples prior to European contact. Letter grading.

143. mestizaje: History of Diverse Racial/Cultural Roots Mexico, 1421 to Present. (4) Lecture, four hours. Historical examination of diverse racial and cultural roots of Chicanas and Chicanos. Utilizing theoretical frameworks of mestizaje, Aztlán, indigenismo, La Raza Cósmica, and mestizaje, and examination of some important groups that have contributed to formation of Mexican national culture. Development of race relations in Mexico during colonial period, with focus on analysis of Na huatl (Aztec). May be repeated for credit with topic or instructor change. P/NP or letter grading.

144. Women’s Movement in Latin America. (4) Same as Labor and Workplace Studies M144 and Women’s Studies M144.) Lecture, four hours. Course on women’s movements and feminism 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 feminism in Latin America that have emerged out of indigenous rights movements, environmental struggles, labor movements, Christianized communities, peasant and rural organizing, and new social movements after violent learning terrains imposed by the state, femininity, feminism, and human rights. Through comparative study of women’s movements in diversity of political systems as well as national and transnational arenas, students will examine conflicts, contexts, and political conditions that give rise to women’s resistance, as well as major debates in field of study. P/NP or letter grading.

M145A. Introduction to Chicano Literature. (4-4) (Same as Spanish M145A-M145B.) Lecture, three hours. Requires: Spanish 25 or 27. Introduction to texts representative of Chicano literary heritage. Seminar, four hours. Examination of Chicana/Latina/Latino politics and aesthetics. May be repeated for credit.

M146. Chicano Narrative. (4) (Same as Spanish M146.) Lecture, three hours. Introduction to major narrative genres in Chicana/Chicano literary tradition — Corrido, Semitranza, chronicle, autobiography, novel, romance, and legend — and way in which narrative forms are formed by and address specific social/political and historical problems. Letter grading.

M147. Transnational Women’s Organizing in Americas. (4) Same as Women’s 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 political relations. Exploration 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 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 changes envisioned by transnational organizing. P/NP 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. Historical examination of political economic context in which affirmative action policies and programs were conceived and implemented. Review of impact on Chicanas/Chicanos, Latinas/Latinos, and other communities. Specific analysis of university admissions, hiring and contracting practices, and state initiatives. Letter grading.

151. Human Rights in Americas. (4) Lecture, four hours. Examination of human rights and immigration 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 the Americas. Analysis of development of regional and international law, institutions, and norms to protect against human rights violations. P/NP or letter grading.

152. Disposable People: U.S. Deportation and Repatriation Campaigns. (4) Seminar, four hours. Examination of deportation campaigns targeted at Mexican and other Latin American workers, residents, and U.S.-born citizens. Addresses various periods of large-scale highly organized deportation and repatriation efforts after violent learning terrains imposed by the state in 19th century, during economic and social panic of Great Depression in 1930s and Operation Wetback in 1950s, and through turn of 21st century, examination of criminalization of Mexican and Latino immigrants, diplomatic 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 on immigration reform that is occurring today. P/NP 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. Special attention to conditions pertaining to characteristics and development of Central American communities. Letter grading.

154. Contemporary Issues among Chicanas. (4) (Same as Women’s Studies M132B.) Lecture, two and one-half hours. Requisite: P/NP or letter grading. 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.

155. Latinos in U.S. (4) (Same as Sociology M155.) Lecture, three hours; discussion, one hour. Designed for juniors/seniors. Exploration of history and social conditions of Latinos in Los Angeles as well as nation-wide; particular emphasis on their location in larger social structure and on comparisons with other minority groups. Topics include migration, family, education, and work issues. P/NP or letter grading.

156A. Immigrant Rights, Labor, and Higher Education. (4) (Same as Asian American Studies M166A and Labor and Workplace Studies M166A.) Seminar, three hours. New immigrant rights movement, with particular emphasis on its role and impact on the labor movement. Overview of history of immigrant rights movement and examination of development of coalition efforts between labor movement and immigrant rights movement narratives of local and transnational actors and their communities. 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 changes envisioned by transnational organizing. P/NP or letter grading.

156B. Research on Immigration Rights, Labor, and Higher Education. (4) (Same as Asian American Studies M166B and Labor and Workplace Studies M166B.) Seminar, four hours. Requisite: P/NP or letter grading. Research on Immigration Rights, Labor, and Higher Education. (4) Expanding the research conducted by students in previous years. Focused on issues 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.

157. Chicano Movement and Its Political Legacies. (4) Lecture, four hours. Collective examination of Chicano Movement of 1960s-1970s with analysis of its political legacies. Grounded in historiographic inquiry and social movement theory, investigation of mobilization of diverse sectors of society; movements, including students, workers, artists, activists, and women. Exploration of myriad issues and struggles that compelled Chicanas/Chicanos to resist such as land and labor rights, education, anti-war movements, community autonomy, police brutality, political inclusion, cultural recovery, racism, sexism, and class ex
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M158. Chicana Historiography. (4) (Same as History M151D and Women’s Studies M157.) Lecture, four hours. Examination of Chicana historiography, looking closely at how practice 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 Spanish Conquest, Mexican Period, American Conquest, Mexican Revolution, and Chicano Movement to excava-

yte untold stories about women’s participation in and contribution to Chicana and Chicano history. P/NP or letter grading.

M159A. History of Chicana 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 (Chicano) community and people of Mexican descent (Indio-Mestizo-Mulato) north of Rio through 17th, 18th, and 19th centuries, with special focus on la- bor and politics. Provides integrated understanding of change over time in Mexican community by inquiry into major formative historical forces affecting community. Social structure, culture, politics, revolution, nationalism, conflict, and international relations. Emphasis on social forces, class analysis, social, economic, and labor conflict, ideas, domination, and resistance. De- velopment and growth of 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.

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 (Chicano) community and people of Mexican descent in U.S. through 20th century, with special fo- cus on labor and politics. Provides integrated under- standing 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, conflict, and ideology. Developmental trends of historical significance occurring both in U.S. and Mexi- co. Lectures, special presentations, reading assignments, written examinations, library and/or field re- search, and submission of paper. P/NP or letter grading.

160. Introduction to Chicana/Chicano Speech in American Culture. (4) Three hours. Survey course presenting (1) basic elements of Chicano lan- guage use, including history of Chicano languages, types and social functions of Chicano speech (pachu- co, calo, Spanglish), sexist language, and multicultural and monolingualism and (2) major social issues associated with language use by Chicanos and other urban ethnic populations. Letter grading.


165. Language in Education. (4) Lecture, three hours. Examination of language issues pertinent to ed- ucational systems, including language inequity, litera- cy, testing, and socialization, as well as institutional ideologies. Letter grading.

166. Paulo Freire for Chicana/Chicano Classroom. (4) Seminar, four hours. Introduction to pedagogy of Paulo Freire and examination of historical and contem- porary problems circumscribing Chicana/Chicano edu- cation. Consideration of Freirian alternatives to tradi- tional curricula and methodology, pedagogy, and critical and historical issues of teaching and learning. P/NP or letter grading.


169. Representations of Indigenous Peoples in Americas. (4) Lecture, four hours. Strongly recom- mended requisite: course 101. Introduction to different forms of representation of indigenous peoples and their presence in Americas, with emphasis on Meso- america and Andes. How indigenous images are ex- pressed, perceived, and constructed at point of contact with Europeans during development of indigenism in and in current period. Discussion of how these relate to Chicana/Chicano identity construction. Letter grad- ing.

M170SL. Latinos, Linguistics, and Literacy. (5) (Same as Applied Linguistics M172SL, Honors Colle- gium M128SL, and Spanish M172SL) Seminar, four hours; field project, four to six hours. Recommended for anthropology/ethnographers, anthropologists/ethnographers use in study- ics related to literacy, including different definitions of literacy, programs for adult preliterates, literacy and gender, approaches to literacy (whole language, pho- nics, Freire’s literacy pedagogy), history of writing systems, phoneme as basis for alphabetic writing, and national literacy campaigns. Required field pro- ject involving Spanish-speaking adults in adult literacy pro- gramming. P/NP or letter grading.

171. Hegemonic Humor: Mass-Media Commercial Comedy. (4) Lecture, four hours. Hegemonic humor directs laughter of more powerful people against those with less power. In this case laughter becomes weap- on used against Latinos and immigrants. With rise of Latinos in last decade, there has been increase of var- ious guises of anti-Latino hegemonic humor in com- mercial mass-mediated popular culture. Exploration of theorizing, as well as today’s myriad examples, of such humor to develop critical literacy of social work it ac- complishes. Letter grading.

172. Chicana and Chicano Ethnography. (4) For- mally numbered 171B. Lecture, four hours. Culture change theory encompasses such issues as innova- tion, syncretism, colonialism, modernization, urbanization, migration, and acculturation. Examination of methodologies anthropologists/ethnographers use in study- ing and analyzing culture change within ethnohistorical background of Mexican and Mexican American people to clarify social and cultural origins of modern habits and customs and, more importantly, unravel various culture change threads of that experience. Topics in- clude technology and evolution, Indian nation-states, misconceptions, peasant, expansionism, industrializa- tion, immigration, ethnicity, and adaptation. Field proj- ect on some aspect of culture change required. P/NP or letter grading.

M173. Nonviolence and Social Movements. (4) (Same as American Studies M173 and Labor and Workplace Studies M173.) Lecture, three hours; dis- cussion, one hour. Overview of nonviolence and its im- pact on social movements both historically and in its present context in contemporary society, featuring lec- tures, conversations, films, readings, and guest speak- ers. Exploration of some historic contributions of civil rights and critique of nonviolent action throughout the recent U.S. history. Examination of particular les- sons of nonviolent movements as they impact social change organizing in Los Angeles. P/NP or letter grad- ing.

M174A-M174B. Restoring Civility: Understanding, Using, and Resolving Conflict. (4-4) (Same as Edu- cation M145A-M145B.) Lecture, one hour; discussion, three hours. Designed for students who want to learn principles of dialogue and mediation, as alternatives to violence, and practice how to apply them in educational and social contexts. 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. Requisites: courses M174A, M174B. Limited to juniors/seniors. Application of student knowledge and experience to help students in partner schools to develop peer medi- nation programs to be sustained by future UCLA stu- dents. Work at partner school sites and demonstration of firm grasp of concepts of conflict resolution through weekly reflective journals, discussion through biweekly meetings, and final journal entry. Application of critical theories and review of literature from earlier courses, and reflection on student field experiences to deepen un- derstanding of violence, its causes, and what schools can do to mitigate it. Letter grading.

M175. Chicana Art and Artists. (4) (Same as Art M184 and World Arts and Cultures M128.) Lecture, four hours. Introduction to Chicana art and artists. Ex- amination of Chicana aesthetic. Chicanas have done many things to clarify social and cultural origins of modern habits and customs and, more importantly, unravel various culture change threads of that experience. Topics in- clude technology and evolution, Indian nation-states, misconceptions, peasant, expansionism, industrializa- tion, immigration, ethnicity, and adaptation. Field proj- ect on some aspect of culture change required. P/NP or letter grading.

176. Globalization and Transnationalism: Local Historical Dynamics and Praxis. (4) Lecture, four hours. Requisites: course M174A, M174B. Focus on transna- tional community formation in comparative global perspective, explored both as historical result of and key future actor in localized dynamics of transnational- ization. Focus on Chicana/o relationship to Mexican Chi- cana/Chicano experience in California as both highly linked node and localized micromycosis of dynamics of globalization that is both affected by as well as influ- ences course of alternative scenarios of globalization. Designed to help students develop critical political economy analysis of interplay between globalization and localized transnational dynamics that together are giving meaning to and among social identi- ties and strategies for struggle throughout world. P/NP or letter grading.

177. Latino Social Policy. (4) Lecture, three hours. Examination of social welfare of Latinos (Chicanos, Puerto Ricans, and Cubans) in U.S. through assess- ment and critical analysis of social policy issues affect- ing them. Survey of social, economic, cultural, and po- litical circumstances affecting ability of Latinos to ac- cess public benefits and human services. Letter grading.


179. Language Politics and Policies in U.S.: Com- parative History. (4) Lecture, four hours. Historical survey of language policies and language groups in U.S. as context to understanding social, legal, and po- litical constraints on bilingualism. Review of federal, state, and city euronal policies and politics, with focus on schooling, administration of government, justice, and workplace. Letter grading.


182. Understanding Whiteness in American His- tory and Culture. (4) (Same as History M151C.) Lecture, three hours; discussion, one hour (when sched- uled). Designed for juniors/seniors. Survey of historical construction, and representation of whiteness in American soci- ety. Readings and discussions trace evolution of “white” identity and explore its historical significance to historical construction of race class in American history. Letter grading.
M183. History of Los Angeles. (4) (Same as History M155.) Lecture; three hours; discussion, one hour (when scheduled). Corequisites: courses M185, M186A, or M186B. Exploration of urban space issues such as who is “public,” what is “public space” at end of 20th century, what defines neighborhoods, and do different ethnic populations use public space differently. P/NP or letter grading.

M185. Whose Monuments Where? Course on Public Art. (4) (Same as Art M165 and World Arts and Cultures M125.) Lecture, four hours. Corequisite: course M166A, M166B, or M166C. Examination of public monuments in U.S. as basis for cultural insight and critique of American values from perspectives 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 defines neighborhoods, and do different ethnic populations use public space differently. P/NP or letter grading.

M186A. Beyond Mexican Mural: Beginning Muralism and Community Development. (4) (Same as Art M186A and World Arts and Cultures M125A.) Studio/lecture, four hours. Corequisite: course M186AL. In-vestigation of muralism as method of community edu-ca- tion, empowerment, and expression. Exploration of issues through development of large-scale collabor-a-tively digitally created image and/or painting for place-ment in community. Students research, design, and work with community participants. P/NP or letter grading.

M186AL-M186BL-M186CL. Beyond Mexican Mu-rals: Muralism and Community Laboratory. (4-4-2) (Same as Art M186AL-M186BL-M186CL and World Arts and Cultures M125AL-M125BL-M125CL.) Corequisite: course M186AL is requisite to M186BL, which is requisite to M186CL. Mural and Digital Laboratory is art studio housed at Social and Public Art Resource Center in Venice, CA, where students work in community-based setting. Open to students during scheduled hours with laboratory tech support, it offers instruction as students independently and in collaborative teams research, de-sign, and produce large-scale painted and digitally generated murals to be placed in community setting. P/NP or letter grading. M186AL. Beginning. Laboratory, four hours. Corequisite: course M186AL. Corequisite: course M186BL. M186CL. Advanced. Laboratory, two hours. Corequisite corequisite course M186CL. M186B. Beyond Mexican Mural: Intermediate Mu-rals and Community Development. (4) (Same as Art M186B and World Arts and Cultures M125B.) Studio/lecture, four hours. Corequisites: courses M186A, M186AL. Corequisite: course M186BL. Continuation of investigation of muralism as method of community edu-ca-tion, development, and empowerment. Exploration of issues through development of large-scale collabor-a-tively digitally created image and/or painting for place-ment in community. Students research, design, and work with community participants. Continuation of proj-ect through installation, documentation, and dedica-tion, with work on more advanced independent proj-ects. P/NP or letter grading.


188. Special Courses in Chicana and Chicano Studies. (4) Seminar, three hours. Some sections may require prior coursework. Departmentally sponsored experimental or temporary courses, such as those taught by visiting faculty or programs. May be repeated for credit. P/NP or letter grading.

190. Research Colloquia in Chicana and Chicano Studies. (2) Seminar, two hours. Designed to bring to-gether students undertaking supervised tutorial research in seminar setting with one or more faculty members to present reports, discuss research meth-o-dologies, share findings, and provide feedback on each other's work. Culminates in public "summit" of Chicana/Chicano student research at which students expected to present polished position papers on their research. May be repeated for credit. P/NP grading.


192. Undergraduate Practicum in Chicana and Chi-cano Studies. (4) Seminar, two hours; field placement, eight hours. Limited to juniors/seniors. Training and supervised practicum for advanced undergraduate students who assist in preparation of materials and/or design, conduct, and evaluate research project or collection on topic and production of proposal for thesis. May be repeated for credit. P/NP grading.

193. Readings/Speaker Series Seminars: Chicana and Chicano Studies. (1) Seminar, one hour. Limited to graduate and undergraduate Chicana/Chicano Studies students. Reading of journal articles associated with speaker topics to en-liven post-colloquia discussions. May not be applied to-ward departmental major or minor elective require-ments. May be repeated for credit. P/NP or letter grading.

194. Research Group Seminars: Chicana and Chi-cano Studies. (2) Seminar, one hour. Designed for undergraduate students who are part of research group. Exposure to current literature in field or re-search of faculty members or students. Use of specific research method on selected topic. May be repeated for credit with topic change. P/NP grading.

195. Community Internships in Chicana and Chi-cano Studies. (4) Tutorial, two hours; field placement, eight hours. Limited to juniors/seniors. Internship in sup-ervised setting in community agency or business. Students meet on regular basis with instructor and pro-vide periodic reports of their experience. May be re-pated for credit. Individual contract with supervising faculty member required. P/NP or letter grading.

196. Research Apprenticeship in Chicana and Chi-cano Studies. (2 to 4) Tutorial, three hours per week per unit. Requisite: course 10A or 10B. Limited to ju-niors/seniors. Entry-level research apprenticeship for upper division students under guidance of faculty men-tor. Participation in all aspects of research project, in-cluding library research, reading materials, and compi-la-tion of data, with scheduled meetings throughout term with faculty mentor for discussion of project. May not be applied toward departmental major or minor re-quirements. May be repeated under different contract consult department. Individual contract required. P/NP grading.

197. Individual Studies in Chicana and Chicano Studies. (2 to 4) Tutorial, one hour. Limited to junior/senior honors program students. Individual intensive study, with scheduled meetings to be ar-ranged between faculty member and student. As-signed reading and tangible evidence of mastery of subject matter required. May be repeated for maximum of 8 units. Individual contract required. P/NP or letter grading.

198A-198B. Honors Research in Chicana and Chicano Studies. (2 each) Tutorial, one hour. Limited to junior/senior honors program students. May be re-pated for credit. Individual contract required. Letter grading.


199. Directed Research or Senior Project in Chi-cana and Chicano Studies. (2 to 4) Tutorial, two hours. Limited to junior/senior honors program students. May be repeated for credit. Individual contract required. P/NP or letter grading.

Graduate Courses

375. Teaching Apprentice Practicum. (1 to 4) Sem-inar, to be arranged. Preparation: apprentice personnel employment as teaching assistant, assistant, 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. Learner-Centered Teaching in Chicana/Chica-no Studies. (4) Seminar, four hours. Designed for graduate students and required of all new department teaching apprentices. Interactive forum for discussing learner-centered teaching in Chicana/Chicano studies. Exploration of diverse classroom strategies and peda-gogical techniques specific to interdisciplinary field. Topics include preparing for discussion sections, pro-moting discussion among class web-sites, office hours, grading, and campus resources. May be repeated once for credit. S/U grading.

CIVIC ENGAGEMENT

Interdisciplinary Minor
College of Letters and Science

UCLA
A265 Murphy Hall
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fax: (310) 267-5166
e-mail: civicengagement@college.ucla.edu
http://www.communitylearing.ucla.edu/

Kathy O’Byrne, Ph.D., Chair

Faculty Committee
Joel D. Aberbach, Ph.D. (Political Science)
Jan de Leeuw, Ph.D. (Statistics)
Jennifer A. Jay, Ph.D. (Civil and Environmental Engineering)
Scope and Objectives

The Civic Engagement minor is designed to provide students with a core analytical, experiential, 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 public policy 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 (CAPP) 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 qualify 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 by research teams at 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 12 units of upper division courses to satisfy the internship requirement. Applications for the UCS program are available in A265 Murphy Hall.

National internships span one term through participation in the Center for American Politics and Public Policy (CAPP) program in Washington, DC.

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.

Civic Engagement

Lower Division Course

10. Introduction to Engaged Scholarship. (2) Lecture, one hour; discussion, two hours; service learning research projects, two hours. Limited to first-year students in College Summer Institute. Introduction to campus resources by organizing meaningful research with faculty members and staff to expose students to history and philosophy of university/community partnerships in general, as well as specific opportunities for active engagement by undergraduate students at UCLA. General overview of civic engagement to provide students with summary of future opportunities for coursework with off-campus partners and list of faculty researchers who work in one of six specific topical areas. Offered in summer only. P/NP 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. P/NP grading.

95. Introduction to Community-Based Internships. (2) Tutorial, one hour; fieldwork, six hours. Introduction to community-based work for freshman/sophomore students who have not completed 90 units. Platform for preplanned, organized, structured, and supervised off-campus experiences with academic context. Acceptable placements include corporate, nonprofit, and governmental organizations that meet criteria for undergraduate internships as established by Center for Community Learning. May be repeated once for credit. P/NP grading.

Upper Division Courses

100. Perspectives on Civic Engagement. (4) Seminar, three hours. Introductory seminar for engaged research and practice open to students who have been accepted in Civic Engagement minor, as well as those from all majors who are interested in theories and concepts of civic engagement within undergraduate education. Letter grading.

105SL. Client-Based Program Evaluation. (5) Seminar, three hours; fieldwork, three hours. Limited to juniors/seniors. Service learning course for undergraduate students and community partners through which students learn theory and practice of program evaluation. Evaluation of public health program in Los Angeles by research teams. Letter grading.

M115. Citizenship and Public Service. (4) (Same as Political Science M115C.) Lecture, three or four hours; discussion, one hour (when scheduled). Recommend- ed prerequisite: Political Science 10. Designed for juniors/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.

133SL. Community-Based Research: Theory and Practice. (5) Seminar, three hours; fieldwork, three hours. Limited to juniors/seniors. Service learning course; research methods for community-based research, in collaboration with community organizations, on theme of client rights: activism and advocacy. Offered in summer only. Letter grading.
163SL. Civic Engagement and Public Use of Knowledge. (5) Seminar, three hours; fieldwork, three hours. Limited to juniors/seniors. Review and analysis of research literature and national discussion of role of citizens in modern-day democracy, including discussion of civic education in higher education and implications for lives of students. 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 education 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.

M194. Capstone Research Seminar. (2) (Formerly numbered M194.) (Same as Disability Studies M194.) Seminar, two hours. Enforced requisite: course 195. 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 the 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.

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. Internship 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.

Scope and Objectives
The civil and environmental engineering programs at UCLA include structural engineering, structural mechanics, geotechnical engineering, earthquake engineering, hydrology and water resources engineering, and environmental engineering. The ABET-accredited civil engineering curriculums lead to a B.S. in Civil Engineering, a broad-based education in structural engineering, geotechnical engineering, hydrology and water resources engineering, and environmental engineering. 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.

Undergraduate Study
The Civil Engineering major is a designated capstone major. In each of the major field descriptions, 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 B.S.

Preparation for the Major
Required: Chemistry and Biochemistry 20A, 20B, 20L; Civil and Environmental Engineering 1, 15; Computer Science 31 (or another programming course approved by the Faculty Executive Committee); Mathematics 31A, 31B, 32A, 32B, 33A, 33B; Physics 1A, 1B, 1C (or Electrical Engineering 1), 4AL.

The Major
Required: Chemical Engineering 102A or Mechanical and Aerospace Engineering 105A, Civil and Environmental Engineering 101, 103, 108, 110, 120, 135A, 150, 153, Materials Science and Engineering 104, Mechanical and Aerospace Engineering 103, 182A; three technical breadth courses (12 units) selected from an approved list available in the Office of Academic and Student Affairs; and at least nine major field elective courses (36 units) that must include the required courses in two of the following tracks and at least two laboratory courses, one of which must be from one of the two selected tracks and the other from any separate track:

Environmental Engineering: Required: One capstone design course from Civil and Environmental Engineering 157B or 157C; recommended courses: 154, 155, 163, 164, 1M66; laboratory courses: 156A, 156B.
Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://www.gdnnet.ucla.edu/gasaalibrary/pgmrqintro.htm. 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 (M.S.) and Doctor of Philosophy (Ph.D.) degrees in Civil Engineering.

Civil and Environmental Engineering

Lower Division Courses

1. Introduction to Civil Engineering. (2) Lecture, two hours; discussion, one hour. Introduces basic concepts of civil engineering profession, including earthquake, environmental, geotechnical, structural, transportation, and water resources engineering. P/NP grading.

15. Introduction to Computing for Civil Engineers. (2) Lecture, two hours; laboratory, two hours; outside study, two hours. Introduction to computer programming using MATLAB. Selected topics in programming, with emphasis on numerical techniques and methodology as applied to civil engineering programs. Letter grading.

58SL. Wetlands and Water Quality Service Learning Course. (4) Lecture, three hours; outside study, nine hours. Learning and teaching of basic water quality concepts and wetland functions in one of two middle school classrooms in Los Angeles. Topics include photosynthesis, respiration, basic water quality parameters (pH, dissolved oxygen, salinity, turbidity), basic contaminant chemistry and wetland precipitation, and role of wetlands in microbial water quality. Field trip with middle school students to Balona Wetlands. Letter grading.

85. Professional Practice Issues in Structural Engineering. (2) Seminar, two hours; outside study, four hours. Introduction to issues of professional practice in structural engineering: understanding and organization of model building codes and material-specific reference standards. Interpretation of architectural and structural design drawings and specifications. Material-independent structural calculations, tributary area, limit state column loads, and estimation of simple seismic and wind loads. P/NP 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


103. Applied Numerical Computing and Modeling in Civil and Environmental Engineering. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Requisites: course 15, Mathematics 33B (may be taken concurrently). Introduction to numerical computing with specific applications in civil and environmental engineering. Topics include error and computer arithmetic, root finding, curve fitting, numerical integration and differentiation, solution of systems of linear and nonlinear equations, numerical solution of ordinary and partial differential equations. Letter grading.


105. Technical Communication. (4) Lecture, four hours; outside study, eight hours. Techniques for effectively communicating technical material accurately, clearly, and briefly, with emphasis on writing and development of oral presentation skills. How to write clearly and concisely, organize material logically, present it in readable style, edit work accurately, and apply sound writing principles to technical documents. Topics include organization of information; application of techniques to achieve unity, coherence, and development; use of parallel grammatical structure effectively; avoidance of common writing errors; and preparation and delivery of oral presentations. Letter grading.


110. Introduction to Probability and Statistics for Engineers. (4) Lecture, four hours; discussion, one hour. Requisites: Mathematics 32A, 33A. Recommended: course 15. 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 and their distributions, functions of random variables, estimation 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 and as material of construction. Soil formation, 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, seven hours. Requisites: course 120. Principles of soil mechanics, methods for foundations and earth structures. Site investigation, including evaluation of soil properties for de-

123. Advanced Geotechnical Design. (4) Lecture, four hours; computer laboratory, two hours; outside study, six hours. Requisite: course 121. Analysis and design of earth dams, including seepage, piping, and slope stability analyses. Case history studies involving landslides, settlement, and expansive soil problems, and design of repair methodologies for those problems. Within context of above technical problems, emphasis on preparation of professional engineering documents such as proposals, work acknowledgements, figures, plans, and reports. Letter grading.


135C. Introduction to Finite Element Methods. (4) (Same as Mechanical and Aerospace Engineering 141C.) Lecture, four hours; laboratory, three hours; discussion, two hours; outside study, seven hours. Requisite: course 130 or Mechanical and Aerospace Engineering 156A or 166A. Introduction to basic concepts of finite element methods (FEM) and applications to solid mechanics and heat transfer. Direct matrix structural analysis; weighted residual, least squares, and Ritz approximation methods; shape functions; convergence properties; inclusion of multidimensional heat flow and elasticity; numerical integration. Practical use of FEM software; geometric and analytically based modeling; preprocessing and postprocessing techniques; term projects. Letter grading.

135L. Structural Design and Testing Laboratory. (4) Lecture, two hours; laboratory, four hours; outside study, six hours. Requisites: courses 15, 135A. Limited to course 142. Comparison of experimental results with analytical results and code requirements to assess accuracies and limitations of calculation procedures used in structural design. Tests include quasi-static tests of structural elements (beams, columns) and systems (slab-column, beam-column) and dynamic tests of simplified building systems. Quasi-static tests focus on assessment of element or subsystem stiffness, strength, and deformation; dynamic tests focus on assessment of periods, mode shapes, and damping. Development of communication skills through preparation of laboratory reports and oral presentations. Letter grading.

137. Elementary Structural Dynamics. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Requisite: course 135B. Basic structural dynamics course for engineering students. Elastic, free, forced vibration, and earthquake response spectra analysis for single and multidegree of freedom systems. Axial, bending, and torsional vibration of beams. Letter grading.

137L. Structural Dynamics Laboratory. (4) Lecture, two hours; laboratory, six hours; outside study, four hours. Requisite or corequisite: course 137. Calibration of instrumentation for dynamic measurements. Determination of natural frequencies and damping factors from free vibrations. Determination of mode shapes, damping factors, and damping factors from forced vibrations. Dynamic similarity. Letter grading.

140L. Structural Components and Systems Testing Laboratory. (4) Lecture, four hours; laboratory, six hours; outside study, four hours. Enforced requisite: course 140. Limited to course 142. Comparison of experimental results with analytical results and code requirements to assess accuracies and limitations of calculation procedures used in structural design. Tests include quasi-static tests of structural elements (beams, columns) and systems (slab-column, beam-column) and dynamic tests of simplified building systems. Quasi-static tests focus on assessment of element or subsystem stiffness, strength, and deformation; dynamic tests focus on assessment of periods, mode shapes, and damping. Development of communication skills through preparation of laboratory reports and oral presentations. Letter grading.

141. Steel Structures. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Requisite: courses 135B, 141 or 142. Design course for civil engineering students, with focus on design and performance of complete building structural systems. International Building Code (IBC) and ASCE 7 dead, live, and earthquake loads. Design of reinforced concrete and structural steel buildings. Computer modeling, analysis, and performance assessment of buildings. Letter grading.


150. Introduction to Hydrology. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Enforced requisite: course 15, Mechanical and Aerospace Engineering 103. Fundamentals of water flow in open channels and pressure conduits, including gravity, pipe flow, and orthotropic and relevant atmospheric processes, water and energy balance, radiation, precipitation formation, infiltration, evaporation, vegetation transpiration, groundwater flow, run-off, and flood stage. Letter grading.


154. Chemical Fate and Transport in Aquatic Environments. (4) Lecture, four hours; outside study, eight hours. Recommended prerequisite: course 153. Fundamental physical, chemical, and biological principles governing movement and fate of chemicals in surface waters and groundwater. Topics include physical transport in various aquatic environments, air-water exchange, acid-base equilibria, oxidation-reduction chemistry, chemical sorption, biodegradation, and bioaccumulation. Practical quantitative problems solved concurrently. Letter grading.

155. Unit Operations and Processes for Water and Wastewater Treatment. (4) Lecture, four hours; discussion, one hour (when scheduled); outside study, seven hours. Enforced requisite: course 153. Chemical, biological, 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; laboratory, four hours; outside study, four hours. Requisites: course 153 (may be taken concurrently). Recommended prerequisite: Chemistry 104 or 105. Basic laboratory techniques in analytical chemistry related to water and wastewater analysis. Selected experiments include gravimetric analysis, titrimetry, spectrophotometry, and redox systems. pH and redox. Concepts to be applied to analysis of “real” water samples in course 156B. Letter grading.
growth, microbial ecology and diversity, microbiology of wastewater treatment, probing of microbes, public health microbiology, pathogen control, cyclic behavior.

M166L. Environmental Microbiology and Biotechnology Laboratory. (Same as Environmental Health Sciences M166L.) Laboratory, two hours; outside study, eight hours. Requisites: courses 120, 121. General laboratory practice within environmental microbiology, sampling of environmental samples, classical and modern molecular techniques for enumeration of microbes from environmental samples, techniques 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/seniors. General characteristics of transportation systems, including streets and highways, rail, transit, air, and water. Carbohydrates, including time-space diagrams, and queueing. Components of transportation system design, including horizontal and vertical alignment, cross sections, earthwork, drainage, 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 juniors/seniors. Analysis of data; collection and analyses; intersection capacity analyses; simulation models; traffic signal design; signal timing design, implementation, and performance evaluation. Intersections, signal perconcepts, architecture, and integration. Letter grading.

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. May be repeated once for credit with topic or instructor change. Letter grading.

194. Research Group Seminars: Civil and Environmental Engineering. (2 to 8) Seminar, two to eight hours; outside study, four to 16 hours. Designed for underclassmen who are part of research group. Involves application of geotechnical principles to environmental problems. Topics include environmental regulations, waste characterization, geosynthetics, solid waste landfill, subsurface barrier walls, and disposal of high water content materials. Letter grading.


226. Geoenvironmental Engineering. (4) Lecture, four hours; outside study, eight hours. Requisite: course 220. Field of geoenvironmental engineering involving interaction of geologic and environmental problems. Topics include environmental regulations, waste characterization, geosynthetics, solid waste landfill, subsurface barrier walls, and disposal of high water content materials. Letter grading.


228L. Advanced Soil Mechanics Laboratory. (4) Lecture, one hour; laboratory, six hours; outside study, one hour. Requisites: courses 121, 122. Theory and laboratory studies covering more advanced aspects of laboratory determination of soil properties and their application to design. Tests to determine permeability, consolidation, and shear strength. Review of advanced instrumentation and measurement techniques. Letter grading.

M230A. Linear Elasticity. (4) Same as Mechanical and Aerospace Engineering M256A.) Lecture, four hours; outside study, eight hours. Requisite: course 121 or 122. Advanced soil mechanics. Topics include constitutive behavior, soil stiffness and strength, soil-water relations, soil consolidation, and foundation analysis. Letter grading.

M230B. Nonlinear Elasticity. (4) Same as Mechanical and Aerospace Engineering M256B.) Lecture, four hours; outside study, eight hours. Requisite: course M230A. Kinematics of deformation, material and spatial coordinates, deformation gradient tensor, nonlinear and linear stress tensors, strain displacement relations; balance laws, Cauchy and Piola stresses, Cauchy equations of motion, balance of energy, stored energy;
constitutive relations, elasticity, hyperelasticity, thermo-elasticity; linearization of field equations; solution of selected problems. Letter grading.


232. Theory of Plates and Shells. (4) Lecture, four hours; outside study, eight hours. Requisite: course 130; six virtual lab assignments. Characteristics of thin plates; energy methods; free vibrations; membrane theory of shells; axisymmetric deformations of cylindrical and spherical shells, including bending. Letter grading.


234. Advanced Topics in Structural Mechanics. (4) Lecture, four hours; outside study, eight hours. Limited to graduate engineering students. Current topics in composite materials, computational methods, finite element analysis, structural synthesis, nonlinear mechanics, and structural mechanics in general. Topics may vary from term to term. Letter grading.


235B. Finite Element Analysis of Structures. (4) Lecture, four hours; outside study, eight hours. Requisite: courses 130, 235A. Direct energy formulations for determination of natural frequencies and vibrations. Finite element equations; analysis of structural systems with one-dimensional elements; introduction to variational calculus; composite sections; reinforcement; material properties and their effect on structural behavior; evaluation of material properties; and application of the finite element method to structural analysis. Letter grading.

235C. Nonlinear Structural Analysis. (4) Lecture, four hours; outside study, eight hours. Requisite: course 235B. Classification of nonlinear effects; material nonlinearities; conservative, nonconservative material behavior; geometric nonlinearities, Lagrangian, Eulerian description of motion; finite element methods in geometrically nonlinear problems; postbuckling behavior of structures; solution of nonlinear equations; incremental, iterative, and programming methods. Letter grading.


243A. Behavior and Design of Reinforced Concrete Structural Elements. (4) Lecture, four hours; outside study, eight hours. Requisite: course 142. Advanced topics in reinforced concrete structures, including stress-strain relationships for plain and confined concrete, moment-curvature analysis of sections, and design for shear. Design of slender and low-rise walls, as well as non-column joist systems. Introduction to displacement-based design and applications of strut-and-lie models. Letter grading.

243B. Response and Design of Reinforced Concrete Structural Systems. (4) Lecture, four hours; outside study, eight hours. Requisites: courses 243A, 246. Information on response and behavior of reinforced concrete buildings to 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 Loads and Safety for Civil Structures. (4) Lecture, four hours; outside study, eight hours. Requisite: course 141 or 142 or 143 or 144. Modeling of load effects and structural mechanics; structural safety analysis; and calculation of capacity reduction factors. Letter grading.

245. Earthquake Ground Motion Characterization. (4) Lecture, four hours; outside study, eight hours. Corequisite: course 137 or 246. 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 modification for site conditions. Letter grading.

246. Structural Response to Ground Motions. (4) Lecture, four hours; outside study, eight hours. Requisites: courses 137, 141, 142, 235A. Spectral analysis of earthquake ground motions; response, time, and Fourier spectra. Response of structures to ground motions due to earthquakes. Computational methods to evaluate structural response. Response analysis, including evaluation of seismic design standards. Limitations due to idealizations. Letter grading.

247. Earthquake Hazard Mitigation. (4) Lecture, four hours; outside study, eight 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, and static and dynamic analysis procedures, code provisions and design methods for seismically isolated structures. Letter grading.


249. Selected Topics in Structural Engineering, Mechanics, and Geotechnical Engineering. (2) Lecture, four hours; outside study, six hours. Review of recent research and developments in structural engineering, mechanics, and geotechnical engineering. Structural analysis, finite elements, structural mechanics, earthquake engineering, ground motion, elasticity, plasticity, structural mechanics, mechanics of composites, constitutive modeling, geomechanics, and geo-technical engineering. May be repeated for credit. S/U grading.

250A. Surface Water Hydrology. (4) Lecture, four hours; outside study, eight hours. Requisite: course 140. In-depth study of surface water hydrology, including discussion and interrelationship of major topics such as rainfall and evaporation, soils and infiltration properties, runoff and snowmelt processes. Introduction to surface water modeling tools, field, and policy issues involved in water resource engineering and management. Letter grading.


250C. Hydrometeorology. (4) Lecture, four hours; outside study, eight hours. Requisite: course 141 or 142 or 143 or 144. In-depth study of hydrometeorological processes. Role of hydrology in climate system, precipitation and evaporation processes, atmospheric radiation, exchange of heat, and moisture 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 151. Application of mathematical program- ming techniques to water resources systems. Topics include reservoir operation, water utility management, timing, sequencing and sizing of water resources projects; and multicriterion planning and conjunctive use of surface water and groundwater. Emphasis on management of water quantity. Letter grading.

251A. Rainfall-Runoff Modeling. (4) Lecture, four hours; outside study, eight hours. Requisite: course 250A. In-depth study of hydrologic modeling concepts, including rainfall-runoff analysis, input data, uncalibration, rainfall- runoff models, optimal timing, determination of parameters, and sensitivity analysis, and application of models for flood forecasting and prediction of streamflows in water resources applications. Letter grading.

251B. Contaminant Transport in Groundwater. (4) Lecture, four hours; outside study, eight hours. Requisites: courses 250B, 253. Phenomena and mecha- nisms of hydrodynamics, governing equa-
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 hydrologic parameters like topography, soil moisture, snow properties, vegetation, and precipitation. Letter grading.

251D. Hydrologic Data Assimilation. (4) Lecture, four hours; outside study, eight hours. Requisites: courses 251A, 251C. Introduction to basic concepts in statistical and 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.

252. Engineering Economic Analysis of Water and Environmental Planning. (4) Lecture, four hours; outside study, eight hours. Requisites: course 106A, one or more courses from Economics 1, 2, 11, 101, 103. Economic theory and applications in analysis and management of water and environmental problems; application of price theory to water resource management and renewable resources; benefit-cost analysis with applications to water resources and environmental planning. Letter grading.


255A. Physical and Chemical Processes for Water and Wastewater Treatment. (4) Lecture, four hours; outside study, eight hours. Requisites: courses 155, 254A. Review of momentum and mass transfer, chemical reaction engineering, coagulation and flocculation, granular filtrations, sedimentation, carbon adsorption, gas transfer, disinfection, oxidation, and membrane processes. Letter grading.


260. Advanced Topics in Hydrology and Water Resources. (4) Lecture, four hours; outside study, eight hours. Requisites: courses 254A, 255A, 255C. Coverage of current research topics in inverse problem of parameter estimation, experimental design, conjunctive use of surface and groundwater, multiobjective water resources planning, and optimization of water resources 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 255B. 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.

262A. Inorganic Chemistry (250A). (4) Same as Atmospheric and Oceanic Sciences M203A.) Lecture, three hours. Requisite for undergraduates: Chemistry 20B. Principles of chemical kinetics, thermodynamics, and quantum mechanics; photochemistry; chemical composition and history of Earth's atmosphere; biogeochemical cycles of key atmospheric constituents; basic photochemistry of troposphere and stratosphere, upper atmospheric processes; air pollution; chemistry and climate. S/U or letter grading.

262B. Atmospheric Diffusion and Air Pollution. (4) Same as Atmospheric and Oceanic Sciences M202B.) Lecture, four hours; outside study, eight hours. Requisites: atmospheric pollution; diffusion from point, line, and area sources; pollution dispersion in urban complexes; meteorological factors and air pollution potential; meteorological processes, chemical, and biological processes. 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 ex-changes across phase boundaries: sediment/water interface; air/water gas exchange; particles, droplets, and bubbles; small-scale dispersion and mixing; effects of reactions on transport of 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.

265A. Mass Transfer in Environmental Systems. (4) Lecture, four hours; outside study, eight hours. Designed for graduate students and atmospheric scientists. Physical mass transfer fundamentals related to contaminant fate and transport in soil, air, and water systems, including soil/water sorption and desorption, contaminant retardation, vaporization and dissolution of nonaqueous phase liquids (NAPL), and other environmental systems. Letter grading.

265B. Contaminant Transport in Soils and Groundwater. (4) Lecture, four hours; computer applications, two hours; outside study, six hours. Requisites: courses 106A, 250A. Principles of mass transfer as they apply in soil and groundwater, independent estimation of transport model parameters; remediating hazardous waste sites. Letter grading.

266. Environmental Biotechnology. (4) Lecture, four hours; outside study, eight hours. Requisites: courses 153, 254A. Environmental biotechnology — concept and potential, biotechnology of pollutant control, bioremediation, biomass conversion: composting, biogas and methane production, S/U 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 contaminant. Hands-on experience using geochemical software packages commonly found 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 remediation. Research/modeling project required. Letter grading.

269. 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.

275. Seminar: Current Topics in Civil Engineering. (2 to 4) Seminar, to be arranged. Lectures, discussions, and student presentations and projects in areas of current interest in civil engineering. May be repeated for credit. S/U grading.

276. Seminar: Engineering. (2 to 4) Seminar, to be arranged. Limited to graduate civil engineering students. Seminars may be organized in advanced technical fields. If appropriate, field trips may be arranged. 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.

496. Directed Individual Study. (1 to 8) Tutorial, to be arranged. Limited to graduate civil engineering students. Petition forms to request enrollment may be obtained from assistant dean, Graduate Studies. Supervised investigation of advanced technical problems. S/U grading.

507A. Preparation for M.S. Comprehensive Examination. (2 to 12) Tutorial, to be arranged. Limited to graduate civil engineering students. Reading and preparation for M.S. comprehensive examination. S/U grading.

507B. Preparation for Ph.D. Preliminary Examinations. (2 to 16) Tutorial, to be arranged. Limited to graduate civil engineering students. S/U grading.

507C. Preparation for Ph.D. Oral Qualifying Examination. (2 to 16) Tutorial, to be arranged. Limited to graduate civil engineering students. Preparation for oral qualifying examination, including preliminary research dissertation. S/U grading.

598. Research for and Preparation of M.S. Thesis. (2 to 12) Tutorial, to be arranged. Limited to graduate civil engineering students. Supervised independent research for M.S. candidates, including thesis prospectus. S/U grading.

599. Research for and Preparation of Ph.D. Dissertation. (2 to 16) Tutorial, to be arranged. Limited to graduate civil engineering students. Usually taken after student has been advanced to candidacy. S/U grading.
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David L. Blank, Ph.D., Chair

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Shane Butler, Ph.D.
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Katherine C. King, Ph.D.
Kathryn A. Morgan, Ph.D.
Sarah P. Morris, Ph.D. (Steinmetz Professor of Classical Archaeology and Material Culture)
John K. Papadopoulos, Ph.D.
Amy E. Richlin, Ph.D.
Giulia Sissa, Ph.D.
Brent H. Vine, Ph.D.
Calvert W. Watkins, Ph.D., in Residence

Associate Professors
Robert A. Gurval, Ph.D.
Alex C. Purves, Ph.D.

Assistant Professors
Chris J. Johanson, Ph.D.
Kathryn J. McDonnell, Ph.D.
Jaan Puhvel, Ph.D.

Adjunct Associate Professor
Catherine Atherton, Ph.D.

Scope and Objectives
The civilizations of ancient Greece and Rome are the focus of research and teaching in the Classics Department. 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 Ph.D. 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 Ph.D. program.

Undergraduate Study
Students considering a major in the department should consult the adviser as soon 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 B.A.
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 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 elective courses 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, 87GE, 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 or Latin, and related courses in civilization, culture, history, linguistics, literature, and closely related languages.

Refer to the UCLA Transfer Admission Guide at http://www.admissions.ucla.edu/prospect/adm_tr.htm for up-to-date information regarding transfer selection for admission.

Greek B.A.
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 of Latin and related courses in civilization, culture, history, linguistics, literature, and closely related languages.

Refer to the UCLA Transfer Admission Guide at http://www.admissions.ucla.edu/prospect/adm_tr.htm for up-to-date information regarding transfer selection for admission.

Greek and Latin B.A.
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 at http://www.admissions.ucla.edu/prospect/adm_tr.htm 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 112 and 119 may be applied only by petition; (2) three upper division courses in classical civilization and/or ancient history (History 112A through 112E, 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 B.A.

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 at http://www.admissions.ucla.edu/prospect/adm_tr.htm 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 112E, 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 adviser; (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 adviser. 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 198A and 198B 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 198A and 198B 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 archeology, 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.

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 16 upper division units applied toward the minor requirements must be in addition to units applied toward major or minor requirements in another department or program. 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.

Greek Minor

The Greek minor is designed to recognize a serious commitment to the study of the Greek language. After a year of elementary Greek (Greek 1, 2, 3) or its equivalent, students select departmental upper division reading courses in ancient Greek prose and poetry that provide close analysis of individual texts, with attention to their historical, literary, and cultural context. Subjects of study include Homeric epic, lyric poetry, tragedy and comedy, history, rhetoric, philosophy, and the New Testament.

To enter the minor, students must have an overall grade-point average of 2.0 or better.

Required Lower Division Courses (14 units):
Greek 2, 3, 20, or equivalent. Greek 16 may be substituted for Greek 2 and 3.

Required Upper Division Courses (20 units):
Five courses selected from Greek 100 through 133.

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, epistolology, 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.

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, http://www.gdnet.ucla.edu/gasas/library/gpmrqintro.htm. 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 (M.A.) degree in Greek, Master of Arts (M.A.) degree in Latin, and Master of Arts (M.A.), Candidate in Philosophy (C.Phil.), and Doctor of Philosophy (Ph.D.) degrees in Classics. M.A. degrees can be earned only after students have been admitted to the Ph.D. program.

Classics

Lower Division Courses

10. Discovering Greeks. (5) Lecture, three hours; discussion, one hour. Knowledge of Greek 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.

30. Classical Mythology. (5) Lecture, three hours; discussion, one hour. Introduction to myths and leg- 
ends of ancient Greece and/or Rome, role of those stories in their societies, and modern approaches to study of major period, theme, or medium of Greek art and ar-
chaeology at discretion of instructor. P/NP or letter grading.

41W. Reading Roman Literature: Writing-Intensive. (5) Lecture, two hours; discussion, two hours. En-
forced requisite: English Composition 3 or 3H or English as a Second Language 36. Exploration in detail and from variety of critical perspectives of carefully se-
lected literary texts characteristic of ancient Greece and significant in Western literary tradition. Satis-
fies Writing II requirement. Letter grading.

42. Cinema and Ancient World. (5) Lecture/screen-
ings, five hours; discussion, 75 minutes. Use of pop-
ular culture and cinema to introduce students to ancient Greek and/or Roman culture; focus at discretion of in-
structor on major period, theme, or medium. P/NP 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 ar-
chaeology 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.

87GE. General Education Seminar Sequences. (5) Seminar, three hours. Enforced requisite: course 20. Focused study of one aspect of ancient Greek or Ro-
man culture or reception of classical tradition. Topics are interdisciplinary in nature (literature, arts, religion, politics, culture) and make connections between an-
cient and postclassical eras. P/NP or letter grading.

Upper Division Courses

M121. History of Political Thought: Ancient and Medieval Political Theory from Plato to Machiavelli. (4) (Same as Poli Sci M111A.) Lecture, three hours. Preparation: one course. Enforced requisite: course 30 or 40 or 100. Designed for juniors/seniors. Exposition and critical analysis of major political philosophers and thinkers from Plato to Machiavelli. P/NP or letter grading.

M124. Modern Receptions of Ancient Political Thought. (4) (Same as Political Science M119A.) Lecture, three hours. Designed for juniors/seniors. Study of how ancient concepts were conceived and reintep-
rated political thought of ancient Greeks and Romans. Topics include examination of influential cases of modern reception of classical antiquity. P/NP or letter grading.

M125. Invention of Democracy. (5) (Same as Political Science M121B.) Lecture, three or four hours; dis-
cussion, one hour (when scheduled). Designed for ju-

150A. Female in Greek Literature and Culture. (4) Lecture, three hours. Requisite: course 10. Interdisci-
plinary study of concept of female in ancient literature and culture. P/NP or letter grading.

150B. Female in Roman Literature and Culture. (4) Lecture, three hours; discussion, one hour. Requisite: course 20. Interdisciplinary study of concept of female in ancient literature and culture. P/NP or letter grading.

151E. 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, includ-
ing topographic and area survey, mapping and record-
ning artifacts, excavation and data analysis. Conducted in Mediterranean area. Concurrently scheduled with course 147E. P/NP or letter grading.

152A. Ancient City: Greek World. (4) Lecture, three hours. Enforced requisite: course 10 or 51A or Art His-
tory 50 or History 1A. Range of interdisciplinary ap-
proaches to study of Athens and/or cities of Greek world, including Asia Minor, south Italy, and Sicily. Ap-
proaches, themes, and periods (both ancient city and recep-
tions 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.

152B. Ancient City: Roman World. (4) Lecture, three hours. Enforced requisite: course 20 or 51B or Art His-
tory 50 or History 1A. Survey of significant period of art and culture. Approaches to study of Rome and/or cities of Italy and Roman Empire. Themes, topics, and periods (both ancient city and recep-
tions 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.

153A. Minoan Art and Archaeology. (4) (Same as Art History M102A.) Lecture, three hours. Preparation: one course or department for topics to be offered in spe-
cific term. P/NP or letter grading.

153B. Mycenaean Art and Archaeology. (4) (Same as Art History M102B.) Lecture, three hours. Requisite: course 10 or 51A or Art History 50. Study of develop-
ment of art and architecture in Minoan Crete from circa 3000 to 1000 B.C. P/NP or letter grading.

153C. Archaic Greek Art and Archaeology. (4) (Same as Art History M102C.) Lecture, three hours. Requisite: course 10 or 51A or Art History 50. Study of develop-
ment of art and architecture in Mycenaean Greece from circa 2000 to 1000 B.C. P/NP or letter grading.

153D. Classical Greek Art and Archaeology. (4) (Same as Art History M102D.) Lecture, three hours. Requisite: course 10 or 51B or Art History 50. Study of develop-
ment of art and architecture of Greek world from approximatively 450 to 350 B.C. P/NP or let-
ter grading.

153E. Hellenistic Greek Art and Archaeology. (4) (Same as Art History M102E.) Lecture, three hours. Requisite: course 10 or 51A or Art History 50. Study of develop-
ment of art and architecture of Hellenistic Greek world from middle of 4th century B.C. including transmi-
tal of Greek art forms to Romans. P/NP or letter grading.

153F. Etruscan Art. (4) (Same as Art History M102F.) Lecture, three hours. Requisite: course 20 or 51B or Art History 50. Arts of Italian peninsula from circa 1000 B.C. to end of Rome. Repre-
sentative study of Etruscan art. P/NP or letter grading.

153G. Roman Art and Archaeology. (4) (Same as Art History M102G.) Lecture, three hours. Requisite: course 20 or 51B or Art History 50. Arts of Rome and its Empire from circa 1000 B.C. to 4th century A.D. P/NP or letter grading.

153H. Late Roman Art. (4) (Same as Art History M102H.) Lecture, three hours. Requisite: course 20 or 51B or Art History 50. Art of Roman Empire from 4th century to 7th century. P/NP or letter grading.

153I-M153J-M153K. Classical Archaeology. (4-4) (Same as Art History M102I-M102J-M102K.) Lecture, three hours. Requisite: course 10, or 20, or 51A, 51B, Art History 50, or History 1A. Knowledge of Greek and Latin not required. General introduction to
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153M. Greeks and Romans on Bay of Naples. (4) Lecture, three hours; fieldwork, 21 hours. Recommended preparation: course from 10, 20, 51A, 51B, or Art History 50. Four-week intensive study of history and cultures of Bay of Naples in classical antiquity. Survey of period from first settlements and colonization by Greeks in 8th century B.C.E. to destruction of Roman towns of Pompeii and Herculaneum in 1st century C.E. Daily lectures and site visits. Field trips to Naples, Cumae, Pozzuoli, Paestum, Pompeii, Herculanum, Capri, Cosa, Naples. Part of UCLA Summer Travel Program. 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. P/NP or letter grading.

163. Ovid and Consequences. (4) Lecture, three hours. Study of Ovid’s Metamorphoses and persistence of Ovid’s influence in 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 30. Study of religion of ancient Greeks. P/NP or letter grading.


M167. Magic in Ancient World. (4) Same as Ancient Near East M167.) 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. Coverage of beliefs in supernatural forces, rites and/or literature. May be repeated for credit. P/NP grading.

172. Language in Ancient Asia Minor. (4) Lecture, three hours. Requisite: course 10 or History 1A. Examination of sex and gender systems of Greek and Roman culture and politics, with opportunity for serious engagement with research in discipline. May be supervised by one faculty member. May be repeated for credit. P/NP grading.

191. Capstone Seminar: Classics. (5) 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. May be supervised by one faculty member. May be repeated for credit. P/NP grading.


199. 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. May be supervised by one faculty member. May be repeated for credit. P/NP grading.


205. 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 reading of relevant ancient sources and modern scholarship. P/NP or letter grading.

210. Paleography of Latin and Vernacular Manuscripts, 900 to 1500. (4) (Same as English M215, French M210, and History M218.) Lecture, three hours. Prerequisite: course 10 or History 1A. Examination 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 Latin 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 presentations of ancient texts. P/NP or letter grading.

220A. Interfaces: Transmission of Roman Literature. (4) Formerly numbered M220A.) Lecture, three hours. Examination of transmission of Latin classical literature in late antiquity, Middle Ages, and Renaissance. Students will develop an understanding of how Latin literature has been preserved. S/U or letter grading.


245. Computing and Classics. (4) Discussion, three hours. Introduction to processing and analysis of digitized texts of classical authors for purposes of literary history, literary criticism. Letter 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 — Aegae Bronze Age. (2 or 4) Seminar, three hours. S/U or letter grading.

251B. Seminar: Classical Archaeology — Greco-Roman Architecture. (4) Seminar, three hours. S/U or letter grading.

251C. Seminar: Classical Archaeology — Greco-Roman Art. (4) Seminar, three hours. May be repeated for credit with topic change. S/U or letter grading.

252. Topography and Monuments of Athens. (2 or 4) Lecture, two or four hours. Detailed study of 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 study in topography and monuments of ancient Rome, combining evidence of literature, inscriptions, and actual remains. S/U or letter grading.

255. Topics in Ancient Religion. (2 or 4) Seminar, three hours. S/U or letter grading.

268. Seminar: Comparative Mythology. (2 or 4) Seminar, three hours. Requisite: course 188. Advanced study of selected topics in Greco and Roman traditions with other ancient Near Eastern and European societies. S/U or letter grading.

278. Graduate Colloquium in Classical Literature. (2) Seminar, three hours. Survey of basic methods of attack on exercises to classical scholarship, including textual criticism, literary interpretation and theory, hermeneutics, interdisciplinary studies, and computer applic-
20. **Intermediate Greek.** (4) Lecture, three hours; discussion, one hour (when scheduled). Requisite: course 15. Preparation. Selections from Plato and other classical Greek texts, along with grammar review. P/NP or letter grading.


34. **Greek Lyric.** (4) Lecture, four hours. Requisite: course 20. Selections from Greek lyric. P/NP or letter grading.


41. **Greek Art.** (4) Lecture, four hours. Requisite: course 20. Selections from Greek art. P/NP or letter grading.

42. **Greek History.** (4) Lecture, four hours. Requisite: course 20. Selections from Greek history. P/NP or letter grading.


44. **Greek Language.** (4) Lecture, four hours. Requisite: course 20. Selections from Greek language. P/NP or letter grading.

45. **Greek Culture.** (4) Lecture, four hours. Requisite: course 20. Selections from Greek culture. P/NP or letter grading.


50. **Greek Culture.** (4) Lecture, four hours. Requisite: course 20. Selections from Greek culture. P/NP or letter grading.


55. **Greek Culture.** (4) Lecture, four hours. Requisite: course 20. Selections from Greek culture. P/NP or letter grading.


60. **Greek Culture.** (4) Lecture, four hours. Requisite: course 20. Selections from Greek culture. P/NP or letter 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.

229. Sight Translation. (2) Seminar, three hours. Preparation: graduate-level knowledge of ancient Greek. Practice in translation of previously unseen texts from variety of authors and genres. Topics include peculiarities of style and vocabulary of distinct genres, literary versus scholarly translation, semantic properties of particular words and constructions. S/U grading.

231A–231B–231C. Later Greek and Byzantine Literature. (2 or 4 each) Seminar, three hours. Studies in various aspects of Byzantine Greek language and literature. Topics vary from year to year. Each course may be taken independently and may be repeated for credit with topic change. S/U (2-unit course) or letter (4-unit course) grading.

233. Byzantine Poetry. (2 or 4) Lecture, three hours. Study of main representatives of both religious and secular poetry. S/U (2-unit course) or letter (4-unit course) grading.


243. Mycenaean Greek. (2 or 4) Seminar, three hours. Script, language, and grammar of Linear B inscriptions; their relevance to ancient Greek linguistic and cultural history. S/U or letter grading.

244. Greek Papyrology. (4) Lecture, three hours. Preparation: reading knowledge of Greek. Introduction to Greek papyri, considered both as historical documents and as carriers of literature. S/U or letter grading.

245. Greek Paleography. (4) Lecture, three hours. Preparation: reading knowledge of Greek. Study of ancient Greek language, literature, and culture. May be repeated for credit with topic change. S/U (2-unit course) or letter (4-unit course) grading.

250. Topical Studies of Ancient Greece. (2 or 4) Lecture, three hours. Advanced study of some aspect of ancient Greek language, literature, and/or culture. May be repeated for credit with topic change. S/U (2-unit course) or letter (4-unit course) grading.

599. Research for Ph.D. Dissertation. (2 to 8) Seminar, three hours. Study of main representatives of both religious and secular poetry: S/U grading.

105A. Beginning Vergil: Selections from Aeneid I-IV. (4) Lecture, three hours. Requisite: course 100. Reading and discussion 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. Reading and analysis of Vergil's Eclogues, Georgics, and/or second half of Aeneid. May be repeated for credit with change in readings and consent of instructor. P/NP or letter grading.


111. Livy. (4) Lecture, three hours. Requisite: course 100. P/NP or letter grading.

112. Tacitus. (4) Lecture, three hours. Requisite: course 100. P/NP or letter grading.


116. Intensive First-Year Latin. (12) Lecture, 19 hours. Eight-week intensive introduction to Latin language equivalent to courses 1, 2, and 3. Offered in summer only. P/NP or letter grading.

120. Intermediate Latin. (4) Lecture, three hours; discussion, one hour (when scheduled). Requisite: course 3 or 16. Formal review of Latin grammar and development of skills in reading original texts of Latin prose. Readings selected to introduce literature and culture of ancient Rome. P/NP or letter grading.

Upper Division Courses

201A. Readings in Roman Prose and Poetry. (4) Lecture, three hours. Enforced requisite: course 20. Close study of prose and poetry selected from Latin authors, with emphasis on specific features of patristic, as opposed to classical, Latin. P/NP or letter grading.

201B. Advanced Roman Prose and Poetry. (4) Lecture, three hours. Advanced readings of selected texts in post-classical Latin prose and poetry. P/NP or letter grading.

202. Seminar: Catullus. (2 or 4) Seminar, 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.

Graduate Courses


201. Roman Epic Tradition. (2 or 4) Seminar, three hours. Close study of one epic poet other than Vergil (e.g., Ennius, Lucan, Valerius Flaccus, Statius, Silius 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 Catullus 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. Propertius. (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.
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 influential 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/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/2-unit course) or letter (4-unit course) grading.

208. Ovid. (2 or 4) Seminar, three hours. S/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 writer as social critic and artist, and of contemporary literary and social environment. S/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 part of writings of following historians. Each course may be taken independently for credit. S/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. Studies in biography in ancient Rome. Literary survey or focused readings on lives of Cornelius Nepos, Suetonius, Tacitus, or imperial chroniclers of 4th century C.E. S/2-unit course) or letter (4-unit course) grading.

215. Seminar: Roman Novel. (2 or 4) Seminar, three hours. Works such as Petronius’ Satyricon and Apuleius’ Metamorphoses: study of literary problems. May be repeated for credit; S/2-unit course) or letter (4-unit course) grading.

216. Roman Rhetoric. (2 or 4) Seminar, three hours. Close study of one rhetorical 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/2-unit course) or letter (4-unit course) grading.

220. Cicero’s Orations. (2 or 4) Seminar, three hours. S/2-unit course) or letter (4-unit course) grading.

221A. Cicero’s Philosophical Works. (2 or 4) Lecture, three hours. S/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/2-unit course) or letter (4-unit course) grading.

222. Seminar: Roman Stoicism. (2 or 4) Seminar, three hours. S/2-unit course) or letter (4-unit course) grading.

223. Lucretius. (2 or 4) Lecture, three hours. S/U grading.

224. Seneca. (2 or 4) Seminar, three hours. Detailed study of one work of prose or poetry by younger Seneca. May be repeated for credit with topic change. S/2-unit course) or letter (4-unit course) grading.

229. Sight Translation. (2) Seminar, three hours. Preparation: graduate-level knowledge of Latin. Practice in translation of previously unseen texts from variety of authors and genres. Topics include peculiarities of style and vocabulary of different genres, literary versus scholarly translation, pragmatic problems of particular words and constructions. S/U grading.

231A-231B. Seminars: Medieval Latin. (2 or 4 each) Seminar, three hours. Preparation: at least one upper division Latin course. Course 231A is not requisite to 231B. Studies in various areas of language and literature of medieval Latin. May be repeated for credit with consent of instructor. S/2-unit course) or letter (4-unit course) grading.

232. Vulgar Latin. (2 or 4) Lecture, three hours. History and characteristics of popular Latin; its development into vernacular forms of Romance languages. S/U or letter grading.

235. Late Latin Poetry. (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 Ovid and fall of Roman Empire. May be repeated for credit with change in author. S/U or letter grading.

236. Late Latin Prose. (2 or 4) Seminar, three hours. Close study, with attention to literary and historical background, of work of one or several prose authors who flourished between death of Tacitus and fall of Roman Empire. May be repeated for credit with change in author. S/U or letter grading.

240. History of Latin Language. (2 or 4) Lecture, three hours. Development of Latin from earliest monuments until its emergence in Romance languages. S/U or letter grading.


245. Neo-Latin. (2 or 4) Seminar, three hours. Preparation: at least two upper division Latin courses. Requires: course 100. Survey of texts by one or more authors from Renaissance to present, written on related topics. S/U or letter grading.

495. College Teaching of Latin. (2) Seminar, to be arranged. Preparation: appointment as teaching assistant. Methodology of instruction in conjunction with classroom practice. May be repeated for credit. S/U grading.

596. Directed Individual Study or Research. (2 to 8) Tutorial, to be arranged. S/U grading.

597. Study for M.A. Comprehensive Examination or Ph.D. Qualifying Examinations. (2 to 8) Tutorial, to be arranged. S/U grading.


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COMMUNICATION STUDIES

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William Kelly, Ph.D.
Karyl K. Kocinski, Ph.D.
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Adjunct Assistant Professor
Barry Sanders, J.D.

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. Employing critical and empirical approaches, the major draws its resources from the social sciences, humanities, and fine arts. Two areas of focus are offered: the concentration in mass communication centers on formal and institutional communication systems and the macroscopic social contexts in which they function; the concentration in interpersonal communication centers on face-to-face communicative interaction in the small group environment.

Undergraduate Study
Communication Studies B.A.

Students fulfilling the major in Communication Studies must complete the seven required lower division courses and a minimum of 14 upper division courses as set forth below. Enrollment in the major is limited. Admission to the major is by application to the committee in charge. Applications are available at http://www.commstudies.ucla.edu to regularly enrolled UCLA students during Spring Quarter.

Preparation for the Major
Students are encouraged but not required to complete as many lower division preparation for the major courses as possible before admission to the program.

Required Lower Division Courses:
Communication Studies 1, 10, one course selected from Anthropology 33, Communication Studies M70, Linguistics 1, or Sociology 24, one statistics course from Economics 41, Statistics 10, or 11. Three additional courses must be selected from Political Science 40, Psychology 10, Sociology 1, and Economics 1 or 2 or 5 or Political Science 30.

Transfer Students
Transfer applicants to the Communication Studies major with 90 or more units must complete at least two of the following seven lower division required courses: Communication Studies 10 or one interpersonal communication and one mass communication course, one public address course, one linguistics course, one statistics
tics course, and three courses from psychology, American government, sociology, and microeconomics or macroeconomics or political economy.

Refer to the UCLA Transfer Admission Guide at http://www.admissions.ucla.edu/prospect/adm_tr.htm for up-to-date information regarding transfer selection for admission.

The Major

Required Core Courses: Communication Studies 100, 101, 150.

Interpersonal Communication Concentration

Each course may be applied toward only one requirement.

Required: Eleven upper division courses as follows:

1. Eight interpersonal communication courses, six of which must be in communication studies, selected from Anthropology 135A, 135B, M140, 141, 142A, 142B, Communication Studies 113, 114, 115, 116, M117, 118, 119, 120, 121, M123W, M124, M125, 126, M127, 128, 129, 130, M144A, M144B, 182, 188B, 191B, Linguistics 103, 170, Philosophy 172, Psychology 137C, M165, 177, 178, Psychology 135 or Sociology 132, Psychology 137I or Sociology 135, Sociology 134, and 156 or 160


Mass Communication Concentration

Each course may be applied toward only one requirement.

Required: Eleven upper division courses as follows:


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. To qualify for graduation with honors, students must (1) complete all requirements for the major, (2) have a cumulative grade-point average of 3.6 or better in upper division coursework in the major and an overall GPA of 3.3 or better in all completed University coursework, (3) complete Communication Studies 198A, 198B, and 198C, and (4) produce a completed satisfactory honors thesis (as determined by a recommendation of their thesis adviser and final approval by the department chair). Consult the student affairs officer for further information.

Computing Specialization

Majors in Communication Studies 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 and 10B, and (3) completing four courses (at least one of which must be in communication studies) from Communication Studies 151, 154, 158, Program in Computing 10C, 20A, 20B, 40A. Courses need to be completed 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 Counseling Office). Students graduate with a bachelor’s degree in communication studies and a specialization in Computing.

Communication Studies

Lower Division Courses

1. Principles of Oral Communication. (4) Lecture, four hours. Enforced requisite: satisfaction of Entry-Level Writing requirement. Examination of foundations of communication and public speaking. Consideration of number of basic theories related to study of communication and development of skills to enable composition and delivery of speeches in accordance with specific rhetorical concepts. Improvement of 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 while improving presentation skills, language usage, reasoning, style, and delivery. Conversation and pronunciation practice. Focus on theory and practice of public speaking, including selection of content, organization of ideas, language, and delivery. Practice in extemporaneous and manuscript speaking. Critical analysis of speeches in both contemporary and historical settings. Special emphasis on group discussions, evaluations, preparation of both private and public speaking skills. Offered in summer only. P/NP or letter grading.

1B. Introduction to Communication. (4) Lecture, four hours. Development 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.

1C. Inside Hollywood with Hollywood Insiders. (4) Lecture, three hours. Survey of historical and cultural traditions in American entertainment industry, with focus on questions of policy and development and how they have shaped contemporary American film and television. Examination of historical and policy issues, with guest lectures on current status of film and television. Survey and analysis by students of one specialization in Computing by (1) satisfying all the requirements for a bachelor’s degree in the major, (2) completing Program in Computing 10A and 10B, and (3) completing four courses (at least one of which must be in communication studies) from Communication Studies 151, 154, 158, Program in Computing 10C, 20A, 20B, 40A. Courses need to be completed 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 Counseling Office). Students graduate with a bachelor’s degree in communication studies and a specialization in Computing.

18. 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 mass communication and interpersonal communication. Study of modes, media, and effects of mass communication, interpersonal processes, and communication theory. Letter grading.

15A. Production of Multimedia Software. (4) Lecture, three hours; laboratory. Distribution of what goes into multimedia software program; discussion of different platforms (PC, Mac, network computers, servers, and transmitters) and distribution means (CD-ROM, DVD-ROM, Internet) and content organization and layout, data structure and management; and overall planning for prototype and final product. P/NP or letter grading.

M70. Origin of Language. (5) Same as German M70 and Indo-European Studies M70. Lecture, three hours; discussion, one hour. Theoretical and methodological issues surrounding origin of language. Topics include evolutionary theory, evolution of man, how language is organized in brain, and science of language, including physiology of speech, phonetics, and comparative reconstruction. Letter grading.

88. Sophomore Seminars: Communication Studies. (4) Seminar, three hours. Limited to maximum of 20 lower division students. Readings and discussions designed to introduce students to current research in discipline. Culminating project may be required. P/NP or letter grading.

Upper Division Courses

100. Communication Theory. (4) Lecture, four hours. Prerequisite: course 10 or Linguistics 1 or Sociology 1 or Psychology 10. Analysis of fundamental nature of human communication; its physical, linguistic, psychological, and sociological bases. Study of theoretical models explicating process and constituents of communicative act. P/NP or letter grading.

101. Freedom of Communication. (4) Lecture, four hours. Analysis of legal, political, and philosophical issues entailed in rights of free expression, access to audience, and access to information. Study of court decisions governing freedom of communication in U.S. P/NP or letter grading.


103A-103B. Forensics. (2-2) Lecture, two hours. Participation in on-campus and intercollegiate forensics activities, including exposure to fundamentals of competitive forensic events. Students practice public address interpretation of literature, debate, oratory, and extemporaneous speaking and engage in independent research and analysis. Each course may be repeated once for credit. P/NP or letter grading. 103A. Basic preparation; 103B. Advanced practicum in speech.

104. Analysis and Briefing. (2) Lecture, two hours. Intensive study of selected political or social issues, preparation of bibliography, analysis and evaluation of issues and arguments. May be repeated once for credit. P/NP or letter grading.
111. Conflict and Communication. (4) Seminar, three hours. Analysis of when and why conflict is prevalent in daily lives (including mass media) and how communication affects reactions to and consequences of conflict. Conflict is part of our evolutionary heritage. How well we handle various conflicts affects, to great degree, our success or failure whenever we interact with others, including intimate relations, school, and workplace. P/NP or letter grading.

112. Current Problems in Evolution and Communication. (4) Seminar, three hours. Requisite: course 114 or consent of instructor. Analysis of contemporary issues in evolutionary communication research. Topics include design of communication systems, animal signaling, social communication, and speech production and perception. P/NP or letter grading.

113. Nonverbal Communication and Body Language. (4) 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 kinesics), with strong emphasis on body language. Readings from variety of related fields. P/NP or letter grading.

114. Understanding Relationships. (4) Lecture, four hours. Explanation of types of communication that occur in various interpersonally related 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.


116. Communication and Conflict in Couples and Families. (Formerly numbered M116.) Lecture, three hours. Examination of (1) dysfunctional communication and conflict 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. (4) (Formerly numbered 117.) (Same as Labor and Workplace Studies M117.) Lecture, four hours. Art and science of negotiation in secluding interpersonal or organizational situations. Theor y and practice that underlies successful negotiation. Experiential course in which students learn and develop negotiation skills, including identifying one's own (and others') interests and values, identifying uncommitted components of successful negotiation, and resolving conflict between parties. P/NP or letter grading.

118. Language and Music. (4) Lecture, three hours. Cognitive and neurological bases of language and music and their relationships to communication, cognition, and culture. P/NP or letter grading.

119. Voice and Its Perception. (4) Lecture, four hours. Focus on how human voice conveys information about identity of speakers, physical characteristics, personality, and emotional state, and on how listeners utilize these cues to make judgments about speakers. Letter grading.

120. Group Communication. (4) Lecture, four hours. Examination of group communication from perspectives of evolutionary psychology, communications, and psycholinguistics. Topics include: emergent properties of coordination, ingroup and outgroup dynamics, gossip, music improvisation, and conversational behavior. P/NP or letter grading.

121. Film and Mass Communication. (4) Lecture, three hours. In recent years there has been sea change in broadcast news and public affairs programming. News was once packaged and presented to audiences in a distinct form, but increasingly news is organized around spontaneous interactional encounters between some combination of journalists, public figures, and ordinary citizens. Examination of individual forms, with emphasis on interviews, presidential press conferences, and political speeches before live audiences, from standpoint of their historical development and consequences for journalism and communication in contemporary society. Primary focus on inner workings of each form of talk — social norms and practices that organize participation and that distinguish forms of broadcast talk from one another and from ordinary conversation. Letter grading.

122. Promoting Dialogue between Diverse Worlds. (4) Lecture, three hours. Exploration of issues related to management of conflict between major areas of world, with focus on historical background, perception gaps, and political contexts. Communication approach es based on nonviolence and management of moral conflict offered as alternatives to clash of civilizations. Letter grading.

M123W. Talk and Body. (5) (Same as Anthropology M148W and Applied Linguistics M161W.) Lecture, four hours; discussion, one hour. Enforced requisite: English Composition 3 or 3H or English as a Second Language 36. Relationship between language and human body raises host of interesting topics. New approaches to phenomena such as embodiment become possible when body is analyzed, not as isolated entity, but as visible agent whose talk 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 I requirement. Letter grading.

M124. Psychology of Language and Gender. (4) (Same as Women's Studies M124.) Lecture, four hours. Examination of interaction of gender and language. Topics include sex differentiation in language cross-culturally; sex bias in lexicon and usage; sex differences in lexicon, syntax, phonology, and nonverbal aspects of sex-differentiated language in children; women's and men's language in various racial/ethnic/class/sexual preference groups; and conversational interaction. Letter grading.

M125. Talk and Social Institutions. (4) (Same as Sociology M125.) Lecture, discussion, CM 125. Three hours. Designed for juniors/seniors. 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. P/NP or letter grading.

126. Evolution of Interpersonal Communication. (4) Lecture, four hours. Examination of current issues in interpersonal communication from perspectives of evolutionary psychology and biology. Topics include coevolution of signer and receiver adaptations, nonverbal communication, sex, romantic relationships, and communication between sexes, implied language use, and deception. Letter grading.


128. Entertainment as Implicit Pedagogy. (4) Lecture, three hours. Entertainment is significant component of the American mass media. In which we are becoming increasingly popular and technically sophisticated. Examination of role of entertainment in U.S. and impact of such marketing on democracy to prepare students to critically analyze and evaluate communication that advances political goals, as well as to become more equipped to disseminate such messages. P/NP or letter grading.


130. Theory of Persuasive Communication. (4) Lecture, four hours. Dynamics of communication design for influence of ways of structuring persuasive discourse; integration of rhetorical materials from relevant disciplines of humanities and social sciences. Letter grading.

131. Culture versus Media? (4) Lecture, three hours. Interpretation of meaning of cultural texts, analysis of representation of particular groups, and consideration of how audiences provide their own meanings and uses to such texts, with focus on media in relation to issues of globalization, consumption, class, race, gender, youth, and sexuality. Letter grading.

132. Multicultural Television. (4) Lecture, four hours. Critical evaluation of television programming and scholarly research of new developments in television. Application of research findings by students to real-world cases of current events in discussions, papers, and presentations. Letter grading.

133. Decoding Media Strategies. (4) Lecture, three hours. Today's mass media are thriving business, centered on cultural identity and freedom of democ racy. How do these different and often conflicting functions determine content of mass media? Examination of psychological dynamics of 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.

M135. Narrative and Mass Communication. (5) (Same as Honors College M135.) Seminar, four hours. Examination of narrative as primary function of mass media, beginning with social, psychological, cultural, and political implications of narrative and basic elements of narrative, then applying these to study of film, television, and print media. P/NP or letter grading.

M137. Transnational Bollywood. (4) (Same as Asian American Studies M172C.) Lecture, three hours. Study of the 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 bet ter understand South Asian American communities. P/NP or letter grading.

138. Political Marketing. (4) Lecture, three hours. Examination of theory and practice of political marketing in U.S. and impact of such marketing on democracy to prepare students to critically analyze and evaluate communication that advances political goals, as well as to become more equipped to disseminate such messages. P/NP or letter grading.


140. Theory of Persuasive Communication. (4) Lecture, four hours. Dynamics of communication design for influence of ways of structuring of persuasive discourse; integration of rhetorical 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 Film. (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 culture functions to shape 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 M124A-M124B.) 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 organization of repair with limited expansions. M144B. Requisite: course M144A. Consideration of some more expanded sequence structures, story structures, topical sequences, and overall structural patterning of conversational interaction.

145. Situation Comedy and American Culture. (4) Lecture, three hours. Historical analysis of sitcom genre from its beginning in late 1940s 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 by media portraying women and/or minorities in entertainment, and informational communication. Letter grading.

M147. Sociology of Mass Communication. (4) (Same as Sociology M176.) Lecture, four hours; discussion, one hour. Studies of social organization as they affect the mass media. P/NP or letter grading.

M148. Marketing, Advertising, and Human Nature. (5) Seminar, four hours. Marketing, advertising, and consumer behavior from viewpoint of evolutionary psychology and biology, including analysis of motives and patterns of consumption, current marketing strategies and marketing myths, and contents and effectiveness of advertising content. P/NP or letter grading.

M149. Media: Gender, Race, Class, and Sexuality. (5) (Same as Labor and Workplace Studies M149 and Women's Studies M149.) Lecture, four hours; activity, one hour. Limited to junior/senior Communication Studies and Women's Studies majors and Labor and Workplace Studies minors. Examination of manner in which media culture induces people to perceive various dominant and marginalized 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 depicted through use of mass media. Guest presentations, lectures, class discussions, and readings. Introduction to theory and practice of cultural studies. 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 maintaining law and order, the second still live. Trade and exploration of history, social effects, and possible futures of digital communication. 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.

158. Evolution of Communication Technology. (4) Lecture, four hours; discussion, one hour. Examination of communication technologies and their impacts on social behavior and culture, four hours. Examination of how computer technologies and social movement have influenced society. Letter grading.

M159. Pornography and Evolution. (4) (Same as Women's Studies M159.) Lecture, three hours. Discussion of theories and research on why pornography exists and its effects. Use of tools 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 papers; deliberative discourses; electoral campaigns. Letter grading.

M161. Electoral Politics: Mass Media and Elections. (4) (Same as Political Science M141D.) Lecture, three or four hours; discussion, one hour (when scheduled). Designed to introduce the understanding of manner in which Americans' political beliefs, choices, and actions are influenced by mass media presentations, particularly during election campaigns. Topics include processes of public opinion formation and change, different types of media “effects,” and role of media in American political process. P/NP or letter grading.

162. Presidential Communication. (4) Lecture, three hours. Examination of historical evolution of presiden
tial communication environment, resources, and strategies, as well as how presidential campaign communication has evolved over time and implications for how presidents govern. Letter grading.

163. Public Diplomacy: Communicating U.S. Ideas to Foreign Citizens. (4) Seminar, three hours. Requisite: course 179. Exploration of relationship between freedom of speech and press and values of liberty, self-actualization, truth, dignity, respect, justice, equality, association, and community. Study of significance of these values examined in connection with issues such as obscenity, defamation, access to media, and control of commercial, corporate, and government speech. P/NP or letter grading.

M162. Free Speech in Workplace. (4) (Formerly numbered 172.) (Same as Labor and Workplace Studies M162.) Lecture, three hours. Focus on concept of freedom of speech and press and its implications for labor movement. 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 limits on speech and limits of academic freedom. P/NP or letter grading.

173. Communicating Complex Policy. (4) Lecture, three hours. Various media offer different comparative advantages/disadvantages for transmission of messages. Specific kinds of print, video, and new media offer different opportunities and problems when content is complex and/or scholarly. Development of media-complexity typologies. Exploration of scholarly works of famed philosophers, sociologists, and communication theorists. Letter grading.

174. Trial by Jury: Communication Perspective. (4) Lecture, four hours. Study of American jury system as communication process. Examination of impact of courtroom television, paid jury consultants, and celebrity prosecutors on system's communication dynamics and motivation and ideology of tradition of trial by jury. Letter grading.

175. Criticism and Public Arts. (4) Lecture, four hours; discussion, one hour (when scheduled). Introduction to methods and problems of criticism in public arts. Study of several types of critical methods: formalistic, descriptive, pragmatic, and aesthetic criticism. Topics include definition of art and criticism, aesthetic media, genre and resources of film, television, theater, and public discourse, varieties of critical method, problems of critical judgment. Letter grading.
177. Libel and Freedom of Expression. (4) Lecture, four hours. Intensive study of law of defamation and its relationship to free flow of information in democracy. Examination of rationale, scope, and effects of libel laws. Topics include application of libel laws to public official, public figure, and private plaintiffs and media and nonmedia defendants; group libel, privileged libel, and libelous fiction. Letter grading.

178. Propaganda and Media. (4) Lecture, three hours. Examination of interaction between media, public opinion, and political, cultural, and economic perspective. Letter grading.

180. Politics of Censorship. (4) Lecture, two hours; simulation teaching, three hours. Requisite: course 101. Examination of process and substance of debates over government and private censorship by having students become active participants in term-long simulated battle over current issue such as book censorship, pornography, or UNESCO’s proposed “New World Information Order.” P/NP or letter grading.

181. Communication and Interpersonal Communication. (2) Seminar, three hours. Designed to bring together students undertaking supervised tutorial research in seminar setting to discuss their work with faculty members. Hands-on course in which students learn to conduct empirical research in communication and evolutionary psychology. Readings, discussions, and average of seven hours per week of research, writing, designing experiments, collecting and processing data, interpreting results). P/NP grading.


185. Field Studies in Communication. (2 to 4) Lecture, two hours; seminar sessions and spend seven hours in approved field or of research of faculty members or students. May be repeated for credit. P/NP grading.

187. Ethical and Policy Issues in Institutions of Mass Communication. (4) Lecture, three hours. Intensive examination of ethical and policy issues arising from interaction of media institutions (print, film, broadcasting, and new technologies) and societal institutions (Congresses, federal agencies, courts, Presidency, schools, churches, political action groups, advertisers, and audiences). P/NP or letter grading.

188A. Variable Topics in Mass Communication. (4) (Formerly numbered 107A.) Lecture, three hours. Variable topics; consult Schedule of Classes for topics to be offered in specific term. May be repeated for credit with topic change. Letter grading.

188B. Variable Topics in Interpersonal Communication. (4) (Formerly numbered 107B.) Lecture, three hours. Variable topics; consult Schedule of Classes for topics to be offered in specific term. May be repeated for credit with topic change. Letter grading.

191A. Variable Topics Research Seminars: Mass Communication. (4) Seminar, three hours. Research seminars on selected topics in mass communication. 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: Interpersonal Communication. (4) Seminar, three hours. Research seminars on selected topics in interpersonal communication. Reading, discussion, and development of culminating project. May be repeated for credit with topic change. P/NP or letter grading.

194. Research Group Seminars: Communication Studies. (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.

197. Individual Studies in Communication Studies. (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 area required. May be repeated for credit. Individual contract required. P/NP or letter grading.

198A-B. Honors Research in Communication Studies. (4-4-4) Tutorial, three hours. Limited to junior/senior majors. May be repeated for credit. Individual contract required. Letter grading. 198A. Requisites: courses 10, 150. Development of comprehensive research project under direct supervision of faculty member. 198B. Requisite: course 198A. Continuation of work initiated in course 198A. Presentation of summary of data gathered and relevant progress to supervising faculty member. 198C. Requisite: course 198B. Continuation of research developed in courses 198A, 198B. Presentation of honors project to supervising faculty member.

199. Directed Research or Senior Project in Communication Studies. (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.

COMMUNITY HEALTH SCIENCES
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Tiffani Brown Garnett, M.P.H.
Nikita Gupta, M.P.H.
Martine U. Hall, M.S., M.P.H.
Susan D. Kirby, Dr.P.H.
Cathy M. Lang, Ph.D.
Vanessa Luke, M.A.
Gia Marson, Ed.D.
Kristen J. McKinney, Ph.D.
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Bonnie Taub, Ph.D.
Joanne Vail-Martill, Ph.D.
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Steven J. Rottman, M.D.
Samuel J. Straton, M.D., M.P.H.

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Janet C. Frank, Dr.P.H.
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Carolyn A. Mendez-Luck, Ph.D.
Paula A. Tavrow, Ph.D.

Field Program Supervisor
Michael L. Prellp, D.P.A., M.P.H., C.H.E.S.
Scope and Objectives

The Department of Community Health Sciences focuses on health as influenced by social and community structures. A central concern is how health-related behaviors of individuals are influenced by and interact with conditions in the social, cultural, physical, and biological environment. Emphasis is on identifying, evaluating, and discouraging health-damaging behaviors and facilitating health-promoting behaviors. The curriculum integrates basic and applied approaches to address public health problems in the community, using the key tools of assessment, planning, and evaluation.

The department offers schoolwide professional (M.P.H., and Ph.D.) and academic (M.S. and Ph.D.) 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 that have as their objective the maintenance and improvement of the health of individuals, families, communities, and populations. 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, http://www.gdnet.ucla.edu/gasaa/library/pgmrqintro.htm. 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 (M.S.) and Doctor of Philosophy (Ph.D.) degrees in Public Health.

Community Health Sciences

Lower Division Courses

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.

90. Aging, Frontiers, and Health Perspectives. (4) Lecture, three hours; discussion, one hour. Introduction to gerontology from public health perspective, emphasizing prevention of illness and promotion of healthy aging. Special attention to health and aging among women and racial/ethnic minorities. Letter grading.

91. Peer Health Counselor Training. (4) Lecture, four hours. Limited to students in Peer Health Counselor Program. Analysis of student healthcare 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

100. Introduction to Community Health Sciences. (4) Lecture, three hours; discussion, one hour. Development of broad understanding of community health, developmental, and psychosocial factors as they affect health, health-related behavior, and implications for public health. Review of theories, models, and modalities of interventions and policies for health promotion and disease prevention. 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.

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.

M140. Health Issues for Asian Americans and Pacific Islanders: Minorities in Health Care. (Same as Asian American Studies M129.) Lecture, three hours; fieldwork, one hour. Introductory overview of 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. Letter grading.

150. Intergroup Dialogue: Theory and Practice of Peer Facilitation. (4) Lecture, four hours. Recommended prerequisite: course 60. Discussion on issues of difference, conflict, and community to facilitate understanding between social/cultural groups. Peer facilitator training course to develop understanding of theoretical and research foundations of intergroup dialogue, peer-facilitated discussions involving relationship building and coalition building through thoughtful engagement around different social identity groups. Study of variety of techniques, tools, and strategies to support students in their capacity to implement sustained dialogues with students from other social identity groups. Letter grading.

160. Intergroup Dialogue: Training Practicum. (4) Seminar, four hours. Enforced prerequisite: course 150. Application and further development of content and skills learned in 150 with emphasis on facilitation of weekly dialogues with students on specific identity theme and further development of knowledge and techniques in areas of group dynamics, conflict intervention, communication and community, and mental health aspects of structural inequality as they relate to discussion of social justice and multicultural issues. Readings in these areas and discussions of ongoing dialogue dynamics. Letter grade for students in public health perspectives.

161. Intergroup Dialogue: Training Practicum. (4) Seminar, four hours. Enforced prerequisite: course 150. Application and further development of content and skills learned in 150 with emphasis on facilitation of weekly dialogues with students on specific identity theme and further development of knowledge and techniques in areas of group dynamics, conflict intervention, communication and community, and mental health aspects of structural inequality as they relate to discussion of social justice and multicultural issues. Readings in these areas and discussions of ongoing dialogue dynamics. Letter grade for students in public health perspectives.

CM170. Improving Worker Health: Social Movements, Policy Debates, and Public Health. (4) (Same as Labor and Workplace Studies M170.) Lecture, three hours; fieldwork, two hours. Examination of interaction between work, health, and environment, analysis of social causes of health disparities, investigation of historical trends and social movements, interpretation of current data, analysis of innovative interventions. Concurrently scheduled with course CM470. P/NP or letter grading.


180. Field Studies in Cancer Control. (4) Lecture, two hours; discussion, one hour; fieldwork, four hours. Recommended prerequisite: Molecular, Cell, and Developmental Biology 60. Designed for seniors. Opportunity for students to become involved in cancer control through classroom discussion, lectures, service in field, and guided research. Biology of cancer, its prevention, early detection, treatment, and rehabilitation. Letter grading.

181. Campus/Community Health and Wellness Promotion: From Theory to Practice. (4) Lecture, two hours; discussion, two hours. Limited to juniors/seniors. Theory, training, and experience in health/wellness promotion and health/wellness education in selected campus communities. Participation in supervised small-group program planning project. Letter grading.

187A-187B. Introduction to Interventions for At-Risk Populations. (4-4) Lecture, three hours; committee meetings/community service, two to six hours. Course 187A is requisite to 187B. Designed for juniors/seniors. Health and social needs/services from primarily public health perspective, drawing on related academic/professional disciplines. Community-based service learning strategy used to enhance knowledge of concepts covered. As part of service portion, students trained as caseworkers and committee members. Letter grading.

195. Community or Corporate Internships in Community Health Sciences. (4) Tutorial, six hours. Limited to juniors/seniors. Internship in community agency or business. Further supervision provided by public health organization for which student is interning. Students are required to work with instructor and provide periodic reports 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 public policy across topics, students develop integrated approach to health of immigrant populations. Letter grading.

M208. Introduction to Demographic Methods. (4) (Same as Biostatistics 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, models of population growth, stable populations, population projection, and demographic sources. Letter grading.

210. Community Health Sciences. (4) Lecture, three hours. Preparation: one social sciences course. Basic concepts, relationships, and policy issues in field of community health, variability in definitions of health and illness, correlates of health and illness behavior, impact of social and community structure on health status, major contemporary approaches to health promotion and health education at community level. Use of comparative international perspective. Letter grading.

211A-211B. Program Planning, Research, and Evaluation in Community Health Sciences. (4-4) Lecture, 16 hours; discussion, 16 hours. Topics include program planning, evaluation, and management of public health programs in community settings. Intro-
ducation of 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 three modules. Letter grading. 211A. Requisite: course 210; 211B. Requisites: courses 210, 211A, and Biostatistics 100A or Epidemiology 100.


M216. Qualitative Research Methodology. (4) (Same as Anthropology M284.) Discussion, three hours. Intensive seminar in qualitative research methodology. Emphasis on using qualitative methods and techniques in research and evaluation related to healthcare. Letter grading.

M218. Questionnaire Design and Administration. (4) (Same as Epidemiology M218.) Lecture, four hours. Requisites: courses 211A and 211B, or Epide- miology 100A. Survey design, testing, field-use, and administration of data collection instruments, with particular emphasis on questionnaires. 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 approach 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.

221. Introduction to Sociocultural Aspects of Health. (4) Lecture, three hours; discussion, one hour. Examination of how social stratification and culture relate to the development of behavioral patterns. Emphasis of four major status characteristics: age, ethnicity, gender, and socioeconomic status. Description of epidemiological patterns and discussion of social meaning of health and healthcare services. Letter grading.

222. Understanding Fertility: Theories and Methods. (4) (Same as Sociology M206.) Lecture, three hours. Preparation: one formal or social demography course. Requisite: Biostatistics 100A. Application of demographic theories and methods to describe fertility trends and differentials and social and proximate determinants of fertility, with emphasis on understanding key processes that lead to fertility declines. For advanced students interested in population, demography of health, and social demography. Letter grading.

223. Tobacco: Prevention, Use, and Public Policy. (4) (Same as Health Services CM221.) Lecture, four hours; discussion, one hour. Designed for juniors and seniors, and graduate students. Study of tobacco use and its health conse-quences, including interplay of historical, biological, so- ciocultural, political, and economic forces with knowl-edge and public policy. Application of human behavior intervention to prevention interventions, cessation interventions, anti-tobacco efforts in U.S., and interna-tional trends in tobacco use. Letter grading.

224. Social Determinants of Nutrition and Health. (4) Lecture, three hours; discussion, one hour. Prerequisite: 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 disadvantaged groups. Overview of literature support-ing relationship between socioeconomic disadvantage and health-related health conditions such as obesity, dia-betes, and osteoporosis. Critical examination of plausi-ble pathways from perspectives of multidisciplines (economics, nutrition, sociology, 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 inter-local strategies to improve access to healthy foods and/or limit access to unhealthy foods. Exploration of methods for assessing social capital 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 gradu- ate biostatistics courses, one graduate epidemiology course. Development of skills in conceptually-based graduate students in producing peer-review-quality research pa-pers, with focus on theoretically informed empirical re-search papers. Examination of other types of manu-script (e.g., research policy grading).


227. Policy and Public Health Approaches to Vio-lence Prevention. (4) Lecture, four hours. Policy re-lations to violence and development of skills to trans-mit knowledge. Examination of wide range of policy topics and how each might be associated with reduction/increase in violence/violent crime. Letter grading.

228. Family and Sexual Violence. (4) Lecture, three hours; community, three to four hours. Examination of rape, incest, and spouse and elder abuse. Presenta-tion of definitions, causes, outcomes, and prevention strategies for sexual-assault and elder abuse. Letter grading.

229. Maternal and Child Nutrition. (4) Lecture, four hours. Nutrition of mothers, infants, and children in countries at various levels of socioeconomic develop-ment; measures for prevention and treatment of pro-tein/calorie malnutrition; relationship between nutrition and mental development; impact of ecological, socio-economic, and cultural factors on nutrition, nutrition edu-cation, and service. Letter grading.


231. Race and Ethnicity as Concept in Practice and Research. (4) (Same as Asian American Studies M239.) Discussion, three hours. Integration of cross-cultural findings in healthcare with current American (U.S.) healthcare system paradigms to facilitate de-signing culturally based public health programs and train culturally competent practitioners. Letter grading.

232. Advanced Seminar: Medical Anthropology. (2 to 4) (Same as Anthropology M236Q, Nursing M273, and Psychiatry M293.) Seminar, three hours. Limited to 15 students. Examination of interrelationships between society, culture, ecology, health, and ill-ness. Basic for written critical analysis and class discus-sion participation. S/U or letter grading.

lic Health and Departments of Education and Psychol-
gy, as well as by relevant public agencies. Letter grad-
ing.

246. Women’s Roles and Family Health. (4) Lec-
ture, two hours; discussion, one hour. Rapidly chang-
ing roles of women throughout the world are having impor-
tant effects on women’s own health and that of their
families, especially indigenous peoples. Research has both
developing and industrialized countries to provide
basis for in-depth discussion of programmatic and poli-
cy implications. Letter grading.

247. Popular Culture and Public Policy. (4) Lec-
ture, four hours. Examination of international popula-
tion change, population-related policies, and public
health implications of demographic processes. Letter grading.

248. Women’s Mental Health. (4) Discussion, three
hours. Designed for graduate students. Prevalence of
psychological distress and psychiatric disorders among
women, with emphasis on impact of social and cultural
factors, including gender roles and socialization, strat-
fication and inequality, work and family roles, diagno-
sis, help-seeking behavior, and treatment. Letter grad-
ing.

254. Intentional Disasters: War and Refugees. (2) Lec-
ture, two hours. Recommended requisite: courses 211A, 211B, 295. Epidemiology 100, one survey meth-
ods course. Previous international experience strongly
encouraged. Overview of intentional disasters, with
focus on technically underdeveloped areas and conse-
quent population migration. Principal focus on health
consequences of these events and strategies to ad-
dress health issues. Letter grading.

255. Keeping Children Safe: Causes and Preven-
tion of Pediatric Injuries. (2) (Same as Epidemiolo-
gy 255.) Lecture, two hours. Injuries have been lead-
ing killer of children for decades. Children have specif-
ically risk factors for injuries, many of which are pre-
ventable. Presentation of approaches to research and
prevention of pediatric injuries. Letter grading.

256. Impulse to 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 coordinat-
ed response, with specific attention to bioterrorism.
Ex-
amination of tools to help students prevent, detect, and
intervene in infectious disease emergencies. Interdisci-
plinary 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,
seven hours. Requisites: courses 211A, 211B, 295. Health
education and emergency management princi-
ples combined to design, plan, implement, and evalu-
ate community disaster preparedness programs, in-
cluding needs assessment, identification of target pop-
ulation, objective writing, program planning, and
process, outcome, and impact evaluation. Letter grad-
ing.

258. Cooperative Interagency Management in Di-
sasters. (4) Lecture, four hours. Recommended requi-
site: course 295. Designed for graduate students.
Specific applications in health disaster situations
and 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 fa-
cilities in disaster situations. Students meet with repre-
sentatives of different agencies involved in disaster re-
sponses and visit one of area’s state-of-art emergency
management operational centers and/or agencies.

259. Health and Culture in Americas. (4) (Same as
Anthropology M266 and Latin American Studies M260.) Lecture, three hours. Recommended requisite:
course 2132. Health implications of culturally, espe-
isogenically/ethnic Latin American populations.
Holistic approach covering politics, economics, history,
ecology, human rights, material/urban, health, cul-
ture, Letter grading.

260. Health and Culture in Americas. (4) (Same as
Sociology M262.) Lecture, three hours. De-
signated for graduate students. Use of city of Los Ange-
les to examine major social and demographic factors
that characterize cities in U.S. Examination of role of
these factors in affecting health outcomes. Letter grad-
ing.

261. Modern Latin America: Traditional Medicine,
Shamanism, and Folk Illness. (4) (Same as Anthropol-
yogy M264 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. Ex-
amination of roles of art, music, religion, and role of
religion and healing practices via lecture, film, and
audiotape. Letter grading

262. Impacts of Aging and Illness. (4) Lecture, four
hours. Recommended: courses 132, 211A. Examination
of physical, psychological, and cultural impact of
aging on health. Initial socialization, family roles, diag-
oses and treatment by health professionals. S/U or
letter grading.

263. Psychosocial Determinants of Health. (4) Lect-
urer, three hours. Preparation: introductory
psychology course. Review of recent scientific
research on psychological and social factors in health
outcomes and disease. Letter grading.

264. Health and Culture in Americas. (4) (Same as
Sociology M262.) Lecture, three hours. De-
signated for graduate students. Use of city of Los Ange-
les to examine major social and demographic factors
that characterize cities in U.S. Examination of role of
these factors in affecting health outcomes. Letter grad-
ing.

265. Foundations of Community Health Sci-
ences. (4-4) Lecture, four hours. Enforced requisite:
course 210. Course 270A is enforced requisite to
270B. Limited to doctoral departmental students.
Ind-
developmental research on which community health sciences are based. Letter grading.

270A-270B. Foundations of Community Health Sci-
ences. (4-4) Lecture, four hours. Enforced requisite:
course 210. Course 270A is enforced requisite to
270B. Limited to doctoral departmental students.
In-
developmental research on which community health sciences are based. Letter grading.

271. Health-Related Behavior Change. (4) Lecture,
four hours. Recommended requisite: course 211. United
behavior science approach to natural determinants of change, as foundation for planned change in health-related be-
"behavior at community, group, and individual levels.
Letter grading.

272. Social Epidemiology. (4) (Formerly num-
bered 272.) (Same as Epidemiology M272.) Lecture,
two hours; discussion, one hour. Required: Epidemiol-
y 100. Relationship between sociological, cultural, and psychosocial factors in etiology, occurrence, and so-
distribution of morbidity and mortality. Emphasis on
factors and other socioenvironmental factors associ-
ated with general susceptibility to disease and subse-
quently mortality. Letter grading.

273. Social Epidemiology of Chronic Disease. (4) Lec-
ture, two hours; discussion, one hour. Required: Epidemiology 100. Relationship between sociological,
cultural, and psychosocial factors in etiology, occurrence,
and distribution of chronic diseases. Topics in-
clude hypertension, coronary heart disease, and can-
cer. Emphasis on lifestyles and the role of various health professionals, espe-
cially physicians. Attention to meaning of professional-
ization and professional/client relationships within
range of organizational settings. S/U or letter grading.

274. Health and Illness Behavior. (4) (Same as
Sociology M249B.) Seminar, three hours. Designed
for graduate students. Seminar discussion based on
student responses to readings on medicalization, health
promotion as moral enterprise and consumerism, and
preoccupation with body. S/U or letter grading.

276. Complementary and Alternative Medicine. (4)
Lecture, three hours. Requisites: courses 100 or 210, Health
Services 100A. Analysis of the role of CAM
providers, relationship of CAM to conventional medicine, impact of CAM on client identity. Letter grad-
ing.

278. Work and Health. (4) (Same as Environmen-
tal Health 200A.) Lecture, three hours; discussion, two hours. Requisite: course 210. Before planning educational components of health program, one must assess behaviors and fac-
ers influencing health problem. Conceptual, theoreti-
cal, and evaluative skills developed and applied in con-
struing community-based educational program. Let-
ter grading.

279. 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 fac-
ers influencing health problem. Conceptual, theoreti-
cal, and evaluative skills developed and applied in con-
struing community-based educational program. Let-
ter grading.

280. Drugs of Abuse from Neurobiology to Policy
and Education. (4) (Same as Neuroscience CM277.)
Lecture, three hours. Emphasis on neurobiological
basis of substance abuse and blends that produce
addiction. Examination of role of CAM providers, relation-
ship of CAM to conventional medicine, impact of CAM on client identity. Letter grad-
ing.
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. (2 to 4) Seminar, one to three hours. Designed for part-time doctoral students who must enroll every term until they are advanced to candidacy. Interactive seminar with focus on research process and social mechanisms in science. May be repeated for credit. S/U grading.

M287. Politics of Health Policy. (4) (Same as Health Services M287.) Lecture, three hours; discussion, one hour. Requisites: course 210, or Health Services 200A and 200B. Examination of politics of health-care process, including effects of political structure and institutions; economic and social factors; interest groups, class/ethnic settings; media and public opinion; and other factors. Letter grading.

288. Health Communication in Popular Media. (4) Lecture, three hours; discussion, one hour. Requisites: course 210 or prior social sciences courses. Designed for graduate students. Topics include how popular media portray health issues, how people use these media, and impact of these media on health behaviors and perceptions. Strategies to influence or understand media, such as media advocacy, health journalism, media literacy, and entertainment education. Case examples include both domestic and global health issues. Media content analysis, audience research, and assessment of media effects. Letter grading.


290. 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 research specialty of faculty member teaching course. May be repeated for credit. S/U or letter grading.


375. Teaching Apprentice Practicum. (1 to 4) Semi- nar, to be arranged. Preparation: apprentice personnel employment as teaching assistant, associate, or fellow. Teacher supervision and regular attendance 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. (2 to 4) Fieldwork, to be arranged. Field observation and studies in selected community organizations for promotion or medical care. Students must file placement and program approval forms with the Student Affairs Office. May not be applied toward M.S. minimum course requirement; 4 units may be applied toward 60-unit minimum total required for M.P.H. de- gree. Letter grading.

401. Measuring Sensitive Topics. (4) Lecture, two hours; discussion, two hours. Limited to School of Pub- lic Health doctoral students. Data collection methods and designs to think about them; ethics in measurement of sensitive topics, review of current best practices in measuring important public health content areas. Letter grading.

M406. Preparing for Smallpox or Other Bioterrorist Events. (2) (Same as Epidemiology M406.) Lecture, two hours. Major current public health issue is massive effort to prepare for possible bioterrorist events. Practi- cal application of principles of epidemiology and public health in preparing for smallpox or other bioterrorist events. Letter grading.

M411. Issues in Cancer Prevention and Control. (4) (Same as Health Services M411.) Lecture, four hours. 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.

M418. Rapid Epidemiologic Surveys in Developing Countries. (4) (Same as Epidemiology M418.) Lectu- re, four hours. Requisites: Biostatistics 100A, Epide- miology 200A, 200B, and 200C (and/or 100). Presen- tation of how to do health surveys in Third World coun- tries. Practical assistance for planning and organizing surveys, including use of microcomputers to develop and test questionnaire, select sample, process and analy- lyze data, and prepare final report. Letter grading.

M420. Children with Special Healthcare Needs: Systems Perspective. (4) (Same as Health Services M420 and Social Welfare M290.) 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, young children/adolescents and adults with developmental disabilities or chronic illness and their families. Letter grading.

425. Child Advocacy: Skills for Effective Action. (4) Lecture, three hours; fieldwork, one hour. Des- signed for graduate students. Use of case method ap- proach to involve students both in classroom discus- sions and in fieldwork projects about which they up- date classmates. Highly respected leaders for children in community share experiences and offer insight. Let- ter grading.

426. School-Linked Services: Integrated Health, Education, and Social Services for Children in Communities. (4) Seminar, three hours; fieldwork, one hour. Designed for graduate students. Examination of school services in context of other dramatic changes, scope of problems facing youth, roles that schools may serve as organizers/delivery sites for comprehensive services, and factors that influence de- velopment of appropriate school service models. Letter grading.

427. Reproductive Health in Sub-Saharan Africa. (4) Lecture, four hours. Recommended requisite: course 210. In-depth understanding of reproductive health challenges facing sub-Saharan Africa and main programs designed to address them. Topics include family planning, STIs, abortion, adolescents, HIV/ AIDS, and refugees. Letter grading.

M428. Child and Family Health Program Community Leadership Seminar. (2) (Same as Health Servic- es M428.) Seminar, two hours. Designed for graduate students. Examination of characteristics of community-based organizations (CBOs) and role of leadership in decision-making process involved in major issues fac- ing maternal and child health in Los Angeles County. Focus specific leadership and roles that are employed by organizations effective in shap- ing maternal and child health policies and programs (or any population-level policies and programs). Leaders from CBOs in Los Angeles meet with students, com- ment on their practicum experiences, and underscore community leadership concepts demonstrated by those CBOs. S/U or letter grading.

431. Foundations of Reproductive Health. (4) Lec- ture, three hours. Limited to graduate students. Under- standing reproductive technologies and practices is critical for public health students interested in designing programs to address problems such as unwanted pregnancy, abortion,, and sexually transmitted diseases, and inadequate preventive services. Examina- tion of foundations of reproductive health from medical perspective, with particular attention to implications for public health programs, health services, and policy. Topics include anatomy and physiology of male and fe- male reproductive health tracts. methods of birth con- trol, medical and surgical abortion, infertility, maternal care, and sexual violence and trauma. S/U or letter grading.

432. Perinatal Healthcare: Principles, Programs, and Policies. (4) Lecture, three hours; discussion, one hour. Comprehensive overview of perinatal health, including perinatal epidemiology, outcome measures, public programs, controversies surround- ing new technology, regionalization, organization of services at federal, state, and county levels, and medi- cal/legal issues. S/U or letter grading.

433. Reproductive Health: Demographic Applica- tions. (4) Lecture, four hours. Introductory aspects of population dynamics, reproductive biology (male and female); contraceptive methods; fertility-related behav- iors and STDs; methods to measure contraceptive (life tables) and program (evaluation) effectiveness. Letter grading.

434A. Maternal and Child Health in Developing Ar- eas. (4) Lecture, four hours. Requisite: course 231. Major health problems of mothers and children in de- developing areas stress population management and maternal and child healthcare, including perinatal epidemiology, outcome measures, public programs, controversies surround- ing new technology, regionalization, organization of services at federal, state, and county levels, and medi- cal/legal issues. S/U or letter grading.

435. Seminar: Advanced Issues in Women’s Health. (4) Seminar, three hours. Designed for one prior women’s health course, one to two biostatis- tics courses, one research methods course. Provides more advanced and in-depth understanding of ways in which scientists “know” about women’s place in scientific discourse. Examination of series of case studies as starting point for discussion. Letter grading.
M436A-M436B. Child Health, Programs, and Policies. (4) (Same as Health Services M436A-M436B.) Lecture, four hours. Requisite: Health Services 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 systems; needs, programs, and policies affecting especially at-risk populations. Letter grading.

437. Principles and Practice of Preventive Medicine. (4) Lecture, two hours; discussion, two hours. Designed for graduate students. Comprehensive review of core knowledge and concepts of preventive medicine, with primary focus on families and disadvantaged. Letter grading.

440. Public Health and National Security at U.S.-Mexico Border. (4) Lecture, four hours. Requisite: course M470, or permission of instructor. Overview of 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 community planning for family planning projects in U.S. and in developing countries. Focus on core competencies: needs assessment, goals and objectives, organizational structure, evaluation, funding; staffing; evaluation design; data and cost analysis; and project presentation. Letter grading.


444. Anthropometric and Dietary Aspects of Nutritional Assessment. (4) Lecture, two hours; laboratory, two hours. Requisite: course 443. Practical skills in anthropometric and dietary assessment, including selection of appropriate methods, data gathering and handling, and interpretation of results. Letter grading.

446. 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 countries, including new concepts in primary health care; mass media, communications, and governmental and international interventions. S/U or letter grading.

447. Health and Social Context in Middle East. (4) Lecture, four hours. Requisite: Permission: background in Islamic or Middle Eastern studies. Requisite: course 200 or 434A. Current health issues and problems of countries in Middle East and implications for social services. Review of historical, demographic, and cultural variation of region to provide background for discussion of trends and patterns of health and nutritional status of population 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 sciences 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, governmental, and nongovernmental organizations in nutrition and implications for meeting needs of vulnerable populations. Letter grading.

449. Nutrition and Chronic Disease. (4) Lecture, four hours. Preparation: one graduate or undergraduate course each in chemistry or biochemistry, physiology, and nutrition, or M.D. degree. Emphasis on 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 clinical nutrition in management of disease. Letter grading.

451. Post-Disaster Community Health. (4) Lecture, four hours. Requisite: course 295. Examination of how public health research and practices can be combined to address post-disaster community health needs, identification of disaster-related health problems, data collection strategies, and service delivery approaches in post-disaster environment. 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 and cost-effective food and nutrition emergency relief approaches and programs. Letter grading.

470. Health Disparities, Health Equity, and SexualMinority Populations. (4) Lecture, two hours; discussion, one hour. Limited to graduate students. Examination of health disparities among 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 national recommendations for achieving reductions in each area. Discussion of considerations for providing clinical care and public health practice in this population, unique social and contextual factors influencing LGBT health status, and methodological issues for conducting 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 organizations. Letter grading.

483. Leadership Development and Empowerment for Health Promotion and Education. (4) Lecture, three hours; discussion, one hour. Requisites: courses 210, 211A, 211B. Development of basic understanding of and competency in leadership development and empowerment support for health promotion in multicultural and distressed communities (e.g., south-central Los Angeles). Letter grading.

484. Risk Communications. (4) Lecture, three hours; fieldwork, two hours. Requisites: courses 210, 211A, 211B, or prior public health and behavioral sciences courses. Risk communication theory, research, and practice, including social and psychological bases of population risk perceptions, media theories, and how risk is portrayed in media. Environmental, product safety, food-borne and infectious diseases, disasters, and bioterrorism communications. 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 grant proposal development, investigation of funding sources, evaluating proposals, developing volunteer and in-kind resources, and implementing ongoing fundraising campaigns. Letter grading.


495B. Teaching in Public Health. (4) Lecture, three hours. Limited to School of Public Health doctoral students. Preparation of advanced doctoral students for teaching responsibilities as part of university career. Although classroom teaching to be emphasized, information and ideas can be applied to other educational and training settings. 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 units 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 12) 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 M.S. minimum total course requirement. May be repeated for credit. S/U or letter 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. 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. May not be applied toward any degree course requirements. May be repeated for credit. S/U grading.

COMPARATIVE LITERATURE

College of Letters and Science

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Assistant Professor
Nouri Gana, Ph.D.

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. UCLA’s program offers students the opportunity to work with faculty members in any of the University’s language and literature departments as well as with the Comparative Literature Department faculty.

The Comparative Literature Department, an interdisciplinary and multinational department, 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 first and foremost on those literary 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 the natural site around which to organize modern language and literary studies.

Undergraduate Study
Comparative Literature B.A.
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 at http://www.admissions.ucla.edu/prospect/adm_tr.htm 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) two upper division literature courses using original language texts in the primary language area; (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 language area is in a language other than English).

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 thesis 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 adviser to take two upper division literature courses using original language texts in the secondary language area, or petition the undergraduate adviser to take two upper division literature courses in translation if their primary language area is in a language other than English.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://www.gdnet.ucla.edu/gasaa/library/pgmrqintro.htm. 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 Comparative Literature offers Master of Arts (M.A.), Candidate in Philosophy (C.Phil.), and Doctor of Philosophy (Ph.D.) degrees in Comparative Literature.

Comparative Literature Minor

Lower Division Courses

1A. World Literature: Antiquity to Middle Ages. (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 major texts in world literature, with emphasis on Western civilization. Texts include major works and authors such as Ælian or Odyssy, 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 2B or 4B. Study of major texts in world literature, with emphasis on Western civilization. Texts include works and authors such as Chaucer’s Canterbury Tales, Dante’s Divine Comedy, Boccaccio’s Decameron, Cervantes’ Don Quixote, Shakespeare, Calderón, Molière, and Racine. 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 2C or 4C. Study of major texts in world literature, with emphasis on Western civilization. Authors include poets, Voltaire, Diderot, Rousseau, Goethe, Flaubert, Ibsen, Strindberg, Dostoevsky, 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 2D or 4D. Study of major literary texts usually focused on focused on major works and authors such as Odyssey, Gilgamesh, Sappho, Greek tragedies, Aeneid, Petronius, Beowulf, Marie de France, Tristan and Isolde, 1001 Nights, Popul Vuh. Satisfies Writing II requirement. Letter grading.

2A.W. Survey of Literature: Antiquity to Middle Ages. (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 1A or 4A. Study of selected 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, Marie de France, Tristan and Isolde, 1001 Nights, Poetique de Rabelais. Satisfies Writing II requirement. Letter grading.

2B.W. 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 4B.
Upper Division Courses

100. Introduction to Literary and Critical Theory. (5) Lecture, four hours. Preparation: satisfaction of Entry-Level Writing and College Writing requirements. Requisites: two courses from Comparative Literature 1 or 2 or English 10 or Spanish 60 series, etc. Seminar-style introduction to theories of comparative literature presented through series of texts illustrative of its formation and practice. Letter grading.

101. Hebrew Literature in English — Literary Traditions of Ancient Israel: Bible and Ancient Near East. (4) (Same as Jewish Studies M150A.) Lecture, three hours. Study of literary culture of ancient Israel through examination of principal compositional strategies of Hebrews, Bible translations (read in translation), P/N or letter grading.

102. Classical Tradition: Epic. (4) Seminar, three hours. Designed for upper division literature majors. Reading of Iliad, Odyssey, Aeneid, Germanic/Ionian illumination of autophrastic autobiography of Assia Djebar, Anne Ernaux, and Jamaica Kincaid to better understand limits of serial autobiographies of Assia Djebar, Annie Ernaux, and Jamaica Kincaid to better understand limits of autobiographical mode to situate self in relation to history of nations and biography of family members. Introduction to theories of subjectivity and to genre of self-writing in France, Africa, and Caribbean. Comparison of cycle of tales more commonly known as Arabian Nights, with emphasis on literary analysis and expository writing. Texts include works and authors such as Swift, Voltaire, Diderot, Rousseau, Goethe, Flaubert, Ibsen, Strindberg, M. Shelley, Dostoevsky, Kafka, James Joyce, Garcia Marquez, and Jamaica Kincaid. Satisfies Writing II requirement. 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 or English 10 or Spanish 60, etc. Introduction to classical methodology and variety of methodological approaches to comparative literature. Various methodological issues will be discussed in relation to a number of key theoretical texts from early 20th century to present, addressing these and other related questions: what does it mean to read comparatively? What is significance of reading across and through linguistic borders? What are criteria for conducting such comparative readings? Is comparative reading more concerned with finding similarities or differences, may be letter grading.

112. Renaissance Drama. (4) Lecture, three hours. Designed for upper division literature majors. Broad introduction to subject matter 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, Shakespeare, and may be concurrently scheduled with course C252. Undergraduate students may read all works in translation. P/N or letter grading.

119. 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/N or letter grading.

120. Individual and Society in Renaissance. (4) Lecture, three hours; discussion, one hour. Requisite: one course from 1A, 1B, 1C, or English Composition 3 or 3H. Exploration of changes in Western man’s relationship to the world, himself, and his art; reading of such works as Don Quixote, Montaigne’s Essays, Boccaccio’s Cento novelle, The Praise of Folly, Utopia. P/N or letter grading.

122. Renaissance Drama. (4) Lecture, three hours. Designed for upper division literature majors. Broad introduction to subject matter 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, Shakespeare, and may be concurrently scheduled with course C252. Undergraduate students may read all works in translation. P/N or letter grading.


124. Contemporary Arab Film and Song. (4) (Same as Arabic M148.) Seminar, 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 realist/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, religion and race. Possible examination of various national cinemas such as Tunisian, Egyptian, Moroccan, Algerian, andPalettestinian. 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/N or letter grading.

132. Symbolism and Decadence. (5) Seminar, four hours. Designed for upper division literature majors. Study of specific poets and poetics related to them in their own right as paradigms of 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 C253. Undergraduate students may read all required French texts in translation. P/N or letter grading.

135. Post-Symbolist Poetry and Poetics. (5) Seminar, four hours. Designed for upper division literature majors. Study of specific poets and poetics related to them in their own right as paradigms of 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 C253. Undergraduate students may read all works in translation. P/N or letter grading.

145. Advantages of Avant-Garde. (5) Seminar, four hours. Designed for upper division literature majors. Study of avant-garde writers from the 19th and 20th centuries, with emphasis on interdisciplinarity of study of avant-garde literature and art, including futurism, Dadaism, Expressionism, Surrealism, new avant-gardes. Works by Marinetti, Boccioni, Duchamp, Man Ray, Breton, Apollinaire, Lissitzky, and Walter Benjamin. Various musical genres 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/N or letter grading.

155. Hemispheric Exchanges. (5) Lecture, three hours. Designed for juniors/seniors. In “Reading North by South,” Neil Larsen claims that North American interest in Latin American literature stems from the intent, being largely product of U.S. Cold War politics, investing in fiction that could produce images of areas
ripe for development. From poetry perspective, dynam-ic was quite different. In 1930s, North American poets became involved in labor of love, reading, circulating, and translating recent or contemporary poetry by their counterparts to south, producing lingua franca with unexplored consequences for poetry north and south. This translated by poets from both hemispheres and examination of conse-quences of these preliminary translations for later de-velopment of poetry on both sides of continental di-vide. Concurrently scheduled with course C255. P/NP or letter grading.

C156. Fictional Fantasies. (4) Seminar, three hours. Designed for upper division literature majors. Time and again in modern literature, corpuses become catalysts or conduits for revelation. What are ghosts that fiction frequently cannot put to rest, and what is their connect-ion to national history or nation language or narrative? Readings from James Joyce, John Banville, Henry James, Toni Morrison, Adolfo Bioy Casares, Juan Car-los Onetti, Juan Rufio, 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 trans-lation. P/NP or letter grading.

C157. Memory and Forgetting. (5) Seminar, four hours. Reading of theoretical accounts of nature of traumatic memory and consideration of relationship between memory and history, meanings of both writing and reading about traumatic events, and discussion of ethical (personal and communal) commitment to mem-ory. Presentation of memoirs of survivors and testimony of importance of authenticity in regard to representa-tions of past. Is memory necessarily based on actual past? How is memory in maintenance of collective mem-ory? How is value of testimony judged? What are criteria on which authenticity is claimed? Concurrently scheduled with course C257. P/NP or letter grading.

C158. Colonial Encounters. (4) Seminar, three hours. Discussion of how Western textual system restricts cultures of colonized peoples to encounter with Euro-peans. As means of understanding limits to European frame of reference, reading of English literature works alongside their postcolonial counterparts. Investigation of how reversal of perspective affects telling of tale. P/ NP or letter grading.

C159. Exile Pleasures: Memory, Writing, and Be-longing in Contemporary Thought and Writings. (4) Lecture, four hours. Engagement of theoretical and literary texts about experience of exile in exiles and question of poetics and possibilities and limitation that this condition brings about. Exploration of relationships between exile, poetic expression, free-dom, memory, writing, and collective identification. Clarification of the difference between “exile” and “forced exile,” proceeding to distinguish between exile understood in terms of (modest) literary trope — and sociohistorical condition of living in exile, asking what does it mean to think about exile in comparative terms? 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 litera-ture and visual arts are in some degree expressions of cultural and philosophical patterns of eras, study of relationships between writers and movements in paint-ing, and vice versa. Interdisciplinary investiga-tion of similarities and differences between plastic and verbal arts in comparative study. May be repeated for credit with instructor and/or topic change. May be concurrently scheduled with course C260. Under-graduate students read all works in translation. P/NP or letter grading.

C161. Fiction and History. (4) Seminar, three hours. Designs 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 Renais-sance historical narratives (Italian humanists, Macra-veli) to 19th- and 20th-century novels by authors such as Stendhal, Verga, Tomasi di Lampedusa, Carpenter, and Kundera. Use of fictional methods by historians. Emphasis on how aesthetic, ideological, and political factors influence authors’ choice and use of historical material. May be concurrently scheduled with course C261. P/NP or letter grading.

M162. Israel Seen through Its Literature. (4) (Same as Jewish Studies M162.) Lecture, three hours. At-tempt to impart profound understanding of Israel as seen through its literature. Examination of variety of liter-ary texts and cultures and oral traditions, one of them in context of their historical backgrounds. P/NP or letter grading.

C163. Crisis of Consciousness in Modern Litera-ture. (5) Seminar, three hours. Designed for upper division literature majors. Study of modern European and American works that are concerned both in sub-ject matter and artistic methods with growing self-con-sciousness of human beings and their society, with fo-cus on works of Kafka, Rilke, Woolf, Sartre, and Ste-vens. May be concurrently scheduled with course C263. Undergraduate students may read all works in translation. P/NP or letter grading.

C164. Modern European Novel. (5) Seminar, three hours. Designed for upper division literature majors. Study of modern European novel’s development from 19th to 21st century. Use of authors such as Hardy, Strindberg, Mann, Joyce, Kafka, Woolf, Nabokov, Grass, Christa Wolf, and En-quist to focus on development of themes such as shifting identity, political and ideological forms and stable or instable formal experimentation, and self-consciousness in nar-rative. May be concurrently scheduled with course C264. Undergraduate students may read all works in translation. May be concurrently scheduled with course C265. P/NP or letter grading.

M165. Holocaust in Literature. (4) (Same as Jewish Studies M187.) Lecture, three hours. Investigation of how Holocaust informs variety of literary and cinema works and raises wide range of aesthetic and moral questions. P/NP or letter grading.

M166. Modern Jewish Literature in English: Dias-pora Literature. (4) (Same as Jewish Studies M261.) Lecture, four hours. Study of literary re-sponses of Jews to modernity, its challenges, and threats. Readings in texts originally written in English or translated from Hebrew, Yiddish, German, Russian, Italian, and Spanish. P/NP or letter grading.

M167. Modern Arabic Literature in English. (4) (Same as Arabic Studies M151.) Lecture, three hours. De-sign for upper division literature majors. Topics may include; Islamic civilization and Arab culture; East-West debate; memory, trauma, and mourning; violence, narrative, and ethics; globalization, oil, and cultural insurgency; Arab culture in transnational context or questions of translation, transcultural exchanges, transla-tion, and marketing. Genres may include prison narra-tives; novel of terror; memoirs by women and/or by ref-ugees; and exploratory travel narratives; Arab and Arab-American poetry; literature of pre-1948; rise of Arab novel. Areas may range from generic look at Arab world to narrow focus on Maghreb or one 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.


C199. Continental African Authors. (4) Lecture, three hours. Designed for upper division literature majors. Analysis of use of historical events, situations, and characters in literary works of France, Spain, and Portuguese colonies. Texts and individual assignments range from French, Spanish, and Portuguese colonial historical narratives, South American historical narratives (Italian humanists, Machia-velli) to 19th- and 20th-century novels by authors such as Stendhal, Verga, Tomasi di Lampedusa, Carpenter, and Kundera. Use of fictional methods by historians. Emphasis on how aesthetic, ideological, and political factors influence authors’ choice and use of historical material. May be concurrently scheduled with course C261. P/NP or letter grading.

CM170. Alternate Traditions: In Search of Female Voices in Contemporary Literature. (5) (Formerly numbered C45B, erstwhile CM150.) 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 topics, 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 M303B and Chi-nese Studies M303B.) Lecture, three hours; discussion, one hour. Knowledge of Chinese not required. In-depth look at Chinese immigrant experience by reading liter-aure and watching films. Theories of diaspora, gender, and race are used to inform thinking and discussion of relevant topics. 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 — phil-o-sophically, scientifically, and economically. Emphasis on relationships of novels to theories of structur-alism, poststructuralism. Readings include authors such as Borges, Beckett, Nabokov, Pynchon, Fuentes, Grass, Boll, and Calvino. Concurrently scheduled with course C272. Undergraduate students read all works in translation. P/NP or letter grading.

C173. Postmodernism and Third World. (4) Semi-nar, three hours. Exploration of intersection between concepts of postmodernism and Third World culture and identity. Re-examination of 18th-century readings of empire, the French Revolution, political structures, and race to inform thinking and discussion of relevant issues. P/NP or letter grading.

M175. Race, Gender, Class. (5) (Same as Asian American Studies M165.) Seminar, three hours. Theo-retical and literary readings combined to explore three main aspects of social and cultural experience (race, gender, class) as separated spheres affecting both minority and majority populations in U.S. Examination of these issues from comparative per-spectives. P/NP or letter grading.


177. Comparative Literature of Francophone and Anglophone Caribbean. (5) Seminar, three hours. Designed for juniors/seniors. Introduction to literature and culture of Caribbean and Africa with focus on literature of Africa and the Caribbean. Topics include history of French and English colonial periods in western Africa, the anti-colonial movement, and its literary legacies, emergence of nationalist discourse, exploration of African politics, and rhetoric of negritude, global poetics of relation, créolité movement, and liter-aure and watching films. Theories of diaspora, gender, and race are used to inform thinking and discussion of relevant topics. P/NP or letter grading.

C178. India Indk: Literature and Culture of Modern South Asia. (5) Seminar, three hours. Survey of sig-nificant issues in history of 20th-century Indian litera-ture and culture. Great works of modern Indian culture by such figures as Rabindranath Tagore, Satyajit Ray, Faiz Ahmed Faiz, and U.R. Anantha Murthy, including novels, short stories, poetry, films, music, and works in cultural criticism and historical scholarship. Central and defining issue for 20th-century Indian culture is experi-ence of British colonial rule and massive cultural and linguistic changes that accompanied it. Exploration of manner in which literature and culture have developed in interaction with powerful social forces, such as strug-gle for national independence from British under lead-ers like Mahatma Gandhi and expansion of Indian dias-pora. Concurrently scheduled with course C278. P/ NP or letter grading.

C187. Reading across Culture. (5) Seminar, three hours. What is it we do when we try to understand worlds, habits, gestures, beliefs other than our own? Do we understand something foreign to us by immersing ourselves in it or by standing apart? Does ability to un-derstand something foreign imply taking universal standpoints? Can we understand beliefs other than our own? Questions of cultural interpre-tation have long history in both Western and non-West-
ern cultures. Discussion of history of questions about cross-cultural interpretation and comparative interpretation of cultures in both comparative literature and cultural anthropology. Reading of some very complex and influential works by such writers as Claude Lévi-Strauss, Amitav 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 Literature. (2 to 4) Seminar, three hours. Designed to bring together students undertaking supervised tutorial research in comparative literature. Seminar and study sessions may be arranged between faculty member and student. Assigned reading and tangible evidence of mastery of subject matter required. May be repeated for credit. P/NP grading.

193. Literature and Visual Arts. (3) Seminar, four hours. Preparation: reading knowledge of at least one language other than English and of modern European and/or American works in original languages. S/U or letter grading. Concurrently scheduled with course C164. Graduate students required to prepare paper based on texts read in original languages and to meet as group one additional hour each week. S/U or letter grading.

C250. 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 or nation-state? Readings from James Joyce, John Steinbeck, 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. Concurrently scheduled with course C156. Graduate students have additional meetings and theoretical readings by Benjamin, Freud, Barthes, Derrida, Rabate, Risikels, and Cavaillès. S/U or letter grading.

C257. Memory and Forgetting. (5) Seminar, four hours. Reading of theoretical accounts of trauma and memory and consideration of relationship between memory and history, meanings of both writing and reading about traumatic events, and discussion of ethical (personal and communal) commitment to memory, autobiography, and memory. Reading of memoirs of survivors and questioning of other traditions of past. Is memory necessarily based on actual past? What is role of testimony in maintenance of collective memory? How is value of testimony judged? What constitutes different kinds of testimony? May be repeated for credit with instructor consent. May be concurrently scheduled with course C157. Graduate students required to give 20-minute presentation as basis for seminar paper. S/U or letter grading.

C260. Literature and Visual Arts. (4) Lecture, three hours. Examination of historical and literary influences on plays. Readings of works of such dramatists as Tasso, Machiavelli, Lope de Vega, Racine, Jonson, Shakespeare. May be concurrently scheduled with course C163. Graduate students required to prepare paper based on texts read in original languages and to meet as group one additional hour each week. S/U or letter grading.

C261. Literature and History. (4) (Same as Arabic M255.) Seminar, three hours. Limited to graduate students. Examination of traditionally diverse literatures of Maghreb in their multiple and competing contexts. Historical, religious, and cultural formations, Pan-Arabism and post-colonial nationhood, Third-Worldism and economic development, modernity and globalization, immigration and citizenship studies, social media, mass media and Star Academy Maghreb, and more. Readings of literatures in English and in English translations from different Maghrebian languages (particularly Arabic, Amazigh, and Berber), and in language and linguistic pluralism, cultural translation, deconstruction, and host of other relevant theories of gender, globalization, and postcolonial cultural studies. S/U or letter grading.

C262. 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, Rimbaud, Verlaine, Mallarmé, Wilde, Yeats, and Eliot. May be concurrently scheduled with course C152. Graduate students required to prepare paper based on texts read in original languages and may meet as group one additional hour each week. S/U or letter grading.

C263. Post-Symbolist Poetry and Poetics. (5) Seminar, four hours. Study of specific poets and poetics related to literary movements from the late 19th to the 20th centuries. Texts may include poems such as W.B. Yeats, Ezra Pound, T.S. Eliot, Paul Valéry, R.M. Rilke, Gunnar Ekelof, 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.

C265. Hemispheric Exchanges. (5) Lecture, three hours. In "Reading North by South," Neil Larsen claims that North American literature with Latin American Graduate Courses

200A. Theory of Comparative Literature. (6) Seminar, three hours. Study of methodology of comparative literature, with emphasis on its history. S/U or letter grading.

200B. Methodology of Comparative Literature. (6) Seminar, three hours. Preparation: course 200A. Study of methodology of comparative literature, with emphasis on its history. S/U or letter grading.


209. Theory of Comparative Literature. (6) Seminar, three hours. Preparation: reading knowledge of one or more historical languages. Emphasis on genealogy of problematical theorems. S/U or letter grading.
domain framed by writing and discourse and that, in turn, some forms of writing are framed by photographic modernities. S/U or letter grading.

267. Comparative Arab Studies. (5) Seminar, three hours. Limited to graduate students. Investigation of ways in which Arab literateurs, artists, and intellectuals have perseveringly sought to imagine and construct viable structures of cultural empowerment on pyre of political project of Arab nationalism and in growing response to globalization and consolidation of Western colonial and imperial ideologies in Arab world. Particular attention to technical and experimental modes of expression through which Arab artists working in different genres have engaged with some persistent and recurrent questions related to their mission, vocation, and commitment (iltizam) to fundamental concerns of Arab world, to responsible mimetic urgency, and to general uses/potencies of rhetoric and poetics within context of ongoing project of Arabization.

CM270. Alternate Traditions: In Search of Female Voices in Contemporary Literature. (5) (Same as Women's Studies CM270.) Seminar, four hours. Designed for graduate students. Weaving together analysis of literary texts by female writers from a variety of national, social, and cultural contexts, this course explores ways in which women have contended with the constraints of their cultural environments, developed textual and visual strategies to resist those constraints, and exercised agency through their writing.

271. Imaginary Women. (4) Seminar, three hours. Preparation: reading knowledge of one appropriate foreign language. Seminar, three hours. Examination of certain links between practice of cultural criticism and problems in historiography of colonial and postcolonial literatures. Selection of key texts by members of Subaltern Studies collective of Indian historians to explore some central issues arising from this relationship. What is the legitimacy of claims to knowledge in an aliened domain of history and literary and cultural theory? Attention to literary texts to practice such interdisciplinary criticism. Notice of "modernity" in colonial setting. What is the role of bourgeoisie in colonial context? What is the kind of modernization does it seek? What is relationship of modern metropolitan bourgeoisie to indigenous one? S/U or letter grading.

278. Latin American Literature in Comparative Context. (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. (4) Seminar, three hours. Examination of various approaches to concept of translation and to its significance for literary studies. Readings include works by Matthew Arndt, Walter Benjamin, George Steiner, and Susan Bassnett. S/U or letter grading.


290. Comparative Literature / 251 Comparative Literature. (4) Seminar, three hours. Seminar on problems and methods of presenting literary texts as exemplary materials in teaching of composition. Deals with theory and classroom practice and involves individual counseling and faculty supervision of students’ performance. May not be applied toward M.A. course requirements. S/U or letter grading.


292. Theories of Empire. (4) Seminar, three hours. History of theorizations of empires in postcolonial and colonialism since relevant writings of Karl Marx and Friedrich Engels. Examination of number of landmark theories of empire and consideration of whether or not they may be said to constitute coherent tradition or line of theoretical development. Question of resistance to imperial rule and role it plays in these theoretical accounts. S/U or letter grading.

294. Seminar: Literary Theory. (5) (Same as Asian M274, German M275, Italian M276, Scandinavian M270, and Spanish M279.) Seminar, three hours. Advanced interdisciplinary seminars to explore philosophical, historical, and critical foundations of literary theory with attention to prominent issues in literary and cultural studies. S/U or letter grading.

297. Death and Limits of Representation. (4) Seminar, three hours. Preparation: reading knowledge of at least one foreign language. Examination of fundamental shifts in relationship that obtains between thinking and death which are closely tied to rethinking of status and structure of representation. 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.


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 arrangement. S/U grading.

596. Directed Individual Study or Research. (2 to 12) Tutorial, to be arranged. Limited to graduate comparative literature students. Necessary for students in comparative literature who need additional individual study and research. May be repeated for credit. S/U grading.
Computational and Systems Biology
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Thomas Chou, Ph.D., Vice Chair
Marc A. Suchard, M.D., Ph.D., Vice Chair

Faculty Committee
Thomas Chou, Ph.D. (Biomathematics, Mathematics)
Joseph J. DiStefano III, Ph.D. (Computer Science, Medicine)
Eleazar Eskin, Ph.D. (Computer Science)
Eliot M. Landaw, M.D., Ph.D. (Biomathematics)
Christopher J. Lee, Ph.D. (Chemistry and Biochemistry)
Matteo Pellegrini, Ph.D. (Molecular, Cell, and Developmental Biology)
Marc A. Suchard, M.D., Ph.D. (Biomathematics, Human Genetics)
Xinshu Xiao, Ph.D. (Physiological Science)

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 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 in bioinformatics, biomedical systems, computer and biosystems, neurosystems, or systems biology. The major is appropriate preparation for employment or for graduate studies in any of these areas, with emphasis on interdisciplinary activities. It is also appropriate preparation for professional school studies in dentistry, engineering, management, medicine, and public health.

Undergraduate Study
The Computational and Systems Biology major is a designated capstone major. The capstone experience is a senior-level sequence of two courses integrating the discipline via mathematical modeling, simulation, and active research and report writing. Students are expected to demonstrate critical thinking skills and familiarity with research techniques needed to successfully pursue a research project in computational and systems biology, conceive and execute a research project on which they engage current methods and theory, communicate original scholarly findings to peers both in oral and written form, and work productively with others as part of a research team. The experience culminates with completion of the senior thesis requirement.

Computational and Systems Biology majors select a coherent integration of courses from one of five designated concentrations: bioinformatics, biomedical systems, computer 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 methodologic 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 mathematical 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 development, 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 management, data representation, graph theory, computational algorithm, or artificial intelligence applications in biological sciences, medicine, or pharmacology. Research problems are typically algorithm oriented or involve graphs, automata, or software development. Examples include algorithmic or graph-theory based studies for managing genomics data, development of knowledge-based systems (KBS) for delivering patient education, and KBS for automating complex biosystem modeling tasks.

The systems biology concentration is designed for students interested primarily in the nervous system, or quantitative neurophysiology, with emphasis on neural system networks that control behavior at molecular, cellular, and whole-organism levels, neural information and control systems, and systems electrophysiology and neural electronic systems for controlling prostheses. Example research problems include analysis of (real) neural networks in normal and abnormal brain function, design of prosthetic systems for hearing (cochlear implant) and walking (spinal cord stimulation) recovery, and MEMS-based brain-machine interface devices.

The systems biology concentration is designed for students who want to understand biological systems holistically and quantitatively, and pursue research with an emphasis on systems and integrative principles in biology or medicine. The curriculum imparts an understanding of systems biology (often called the new physiology) using dynamical systems modeling, control, computer simulation, and other computational methods — integrated with the biology. For example, at the cellular level, systems biologists integrate proteomic, transcriptomic, and metabolomic information into a more complete systems picture of living organisms. However, the methodologies include single-scale or multiscale modeling for enhancing understanding of regulatory biomechanisms at all levels — molecular, cellular, organ, and/or whole-organism levels—and are prevalent in population and ecosystem studies, as well as systems-level problems in medicine and pharmacology.

Computational and Systems Biology B.S.

Capstone Major
Computational and Systems Biology Premajor

Students entering UCLA directly from high school or first-term transfer students who declare the Computational and Systems Biology premajor at the time of application are automatically admitted. Current UCLA students need to file a petition with the Undergraduate Advising Office in 4436 Boelter Hall.

All students are identified as premajors until they satisfy the preparation for the major requirements by (1) achieving a minimum 2.7
grade-point average in all premajor mathematics courses, (2) achieving a minimum 3.0 GPA and a minimum grade of C in all premajor courses, and (3) filing a petition to declare the Computational and Systems Biology major.

Preparation for the Major
Required: A minimum of 82 to 94 units (depending on the computer programming course and physics sequence selected), including Chemistry and Biochemistry 20A, 20B, 20L, 30A; Computer Science 31 or Program in Computing 10A; Life Sciences 1, 2, 3, 4; Mathematics 31A, 31B, 32A, 32B, 33A, 33B, 115A; Physics 1A, 1B, and 1C (or Electrical Engineering 1), or 1AH, 1BH, and 1CH.

Students following the bioinformatics or the computer systems concentration must also complete Computer Science 32, or Program in Computing 10B and 10C.

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, one psychology course, and one programming course using C++.

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 at http://www.admissions.ucla.edu/prospect/adm_tr.htm for up-to-date information regarding transfer selection for admission.

The Major
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, 3.0 GPA overall, and a minimum grade of C in each preparation for the major course).

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 (9 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, 185, (2) two probability and statistics courses from one of the following groups: (a) Statistics 100A and 100B or (b) Mathematics 170A and Statistics 100B or (c) Electrical Engineering 131A and Statistics 100B, and (3) two signals, systems, and control systems courses: (a) Electrical Engineering 102 and (b) Electrical Engineering 141 or Mechanical and Aerospace Engineering 171A.

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 at http://www.cs.ucla.edu/C&S/.

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 and 10C are completed in the premajor.

Biomedical Systems (at least 20 units): Biomedical Engineering CM102, CM103, Electrical Engineering 103 (or Mathematics 151A), and two additional courses from the biomedical systems approved course list.

Computers and Biosystems (at least 20 units): Biomedical Engineering CM102 (or CM103 or Molecular, Cell, and Developmental Biology M140 or 144 or Physiological Science 166), Computer Science 170A (or Electrical Engineering 103 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 are completed in the premajor.

Neurosystems (20 units): Neurosciences 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 144), 172 (or Physiological Science 125), and two additional courses from the systems biology approved list.

Capstone Research Requirement
Required: Computational and Systems Biology M186 to be taken in the sophomore or junior year and M187 to be taken in the junior or senior year after completion of course M186.

Hons 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.

Computational and Systems Biology
Upper Division Courses
M184. Introduction to Computational and Systems Biology. (2) Formerly numbered M186A. (Same as Biomedical Engineering M184 and Computer Science M184.) Lecture, two hours; outside study, four hours. Requisites: Computer Science 31 or Program in Computing 10A, Mathematics 31A, 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 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.

185. Thesis Research Opportunities in Computational and Systems Biology. (2) Lecture, one hour; discussion, one hour; laboratory, two hours; outside study, two hours. Requisites: course M184, Mathematic 31A, 31B, 32A, 32B, 33A, 33B, Life Sciences 2, 3, 4. Introduction to research opportunities in computational and systems biology to prepare 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 grading.

M186. Computational Systems Biology: Modeling and Simulation of Biological Systems. (5) Formerly numbered M186B. (Same as Biomedical Engineering CM186 and Computer Science CM186.) 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, multi-compartmental, 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. Thesis Research and Research Communication in Computational and Systems Biology. (2 to 4) (Formerly numbered M186C.) (Same as Biomedical Engineering CM187 and Computer Science CM187.) Lecture, one hour; discussion, two hours; laboratory, one hour; outside study, eight hours. Requisite: course M186. 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. 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.
The computer science and engineering curriculum is accredited by the Computing Accreditation Commission and the Engineering Accreditation Commission of ABET, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012, (410) 347-7700.

Preparation for the Major

Required: Chemistry and Biochemistry 20A; Computer Science 1, 31, 32, 33, 35L, M51A (or Electrical Engineering M16); Electrical Engineering 1, 2, 10; Mathematics 31A, 31B, 32A, 32B, 33A, 33B, 61; Physics 1A, 1B, 4A, 4B.

The Major

Required: Computer Science 111, 118, 131, M151B (or Electrical Engineering M116C), M152A (or Electrical Engineering M116L), 180, 181, Electrical Engineering 102, 110, 110L, 115A, 115C, Statistics 100A; three technical breadth courses (12 units) selected from an approved list available in the Office of Academic and Student Affairs; one capstone design course (Computer Science 152B); and three upper division computer science elective courses (12 units), one of which must be selected from Computer Science 143 or 161 or 174A. The remaining two elective courses must be selected from Computer Science 112, 113, 114, M117 (or Electrical Engineering M117), CM121 (or Chemistry and Biochemistry CM160A), CM122 (or Chemistry and Biochemistry CM160B), CM124 (or Human Genetics CM124), 130, 132, 133, 136, 143, 144, 151C, 161, 170A, M171L (or Electrical Engineering M171L), 174A, 174B, C174C, 183, M184 (or Biomedical Engineering M184 or Computational and Systems Biology M184), CM186 (or Biomedical Engineering CM186 or Computational and Systems Biology M186), CM187 (or Biomedical Engineering CM187 or Computational and Systems Biology M187), Electrical Engineering 103 may be substituted for one elective (credit is not given for both Computer Science 170A and Electrical Engineering 103 unless one of the courses is included in the technical breadth area); 4 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 section earlier in this catalog.

Computer Science and Engineering B.S.

Capstone Major

The ABET-accredited computer science and engineering curriculum at UCLA provides 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.
Computer Science B.S.

Capstone Major

The computer science curriculum is designed to accommodate students who want professional preparation in computer science but do not necessarily have a strong interest in computer systems hardware. The curriculum consists of components in computer science, a minor or technical support area, and a core of courses from the social sciences, life sciences, and humanities. Within the curriculum, students study subject matter in software engineering, principles of programming languages, data structures, computer architecture, theory of computation and formal languages, operating systems, distributed systems, computer modeling, computer networks, compiler construction, and artificial intelligence. Majors are prepared for employment in a wide range of industrial and business environments.

The computer science curriculum is accredited by the Computing Accreditation Commission of ABET, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012, (410) 347-7700.

Preparation for the Major

Required: Chemistry and Biochemistry 20A; Computer Science 1, 31, 32, 33, 35L, M51A (or Electrical Engineering M16); Electrical Engineering 1; Mathematics 31A, 31B, 32A, 32B, 33A, 33B, 61; Physics 1A, 1B, 4AL, 4BL.

The Major

Required: Computer Science 111, 118, 131, M151B (or Electrical Engineering M116C), M152A (or Electrical Engineering M116L), 180, 181, Statistics 100A; three science and technology courses (12 units) not used to satisfy other requirements, that may include three upper division computer science courses or three courses selected from an approved list available in the Office of Academic and Student Affairs; three technical breadth courses (12 units) selected from an approved list available in the Office of Academic and Student Affairs; one capstone software engineering or design course from Computer Science 130 or 152B; and six upper division computer science elective courses (24 units), two of which must be selected from Computer Science 143, 161, or 174A and one of which must be from 112 or 170A or Electrical Engineering 103 (credit is not given for both Computer Science 170A and Electrical Engineering 103 unless one of the courses is included in the technical breadth area). The remaining three elective courses must be selected from Computer Science 112, 113, 114, M117 (or Electrical Engineering M117), M121 (or Chemistry and Biochemistry CM160A), M122 (or Chemistry and Biochemistry CM160B), M124 (or Human Genetics CM124), 130 (unless taken as a required course), 132, 133, 136, 143, 144, 151C, 152B (unless taken as a required course), 161, 170A, M171L (or Electrical Engineering M171L), 174A, 174B, C174C, 183, M184 (or Biomedical Engineering M184 or Computational and Systems Biology M184), CM186 (or Biomedical Engineering CM186 or Computational and Systems Biology M186), CM187 (or Biomedical Engineering CM187 or Computational and Systems Biology M187). If students have not taken Computer Science 130, one elective course must be 132; 4 units of either Computer Science 194 or 199 may be applied as an elective by petition.

For information on University and general educational requirements, see the College and Schools 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, http://www.gdnet.ucla.edu/gds/gradlibrary/program_requirements.html. 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, Master of Engineering, Master of Doctor of Philosophy (Ph.D.) degrees in Computer Science. A concurrent degree program (Computer Science M.S./Management M.B.A.) is also offered.

Computer Science

Lower Division Courses

1. Freshman Computer Science Seminar. (1) Seminar, one hour; discussion, one hour. Introduction to department resources and principal topics and key ideas in computer science and computer engineering. Assignments give students independent study and writing skills. Letter grading.

2. Great Ideas in Computer Science. (4) Lecture, four hours; outside study, eight hours. Broad coverage for liberal arts and social sciences students of computer science theory, technology, and implications, including artificial and neural machine intelligence, computational limits, virtual reality, cellular automata, artificial life, programming languages survey, and philosophical and societal implications. P/NP or letter grading.

31. Introduction to Computer Science I. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Introduction to computer science via theory, applications, and programming. Study of algorithms, operators and control structures, input/output, procedural abstraction. Introduction to object-oriented software development. Functions, recursion, arrays, strings, pointers. Abstract data types, object-oriented programming. Examples and exercises from computer science theory and applications. Letter grading.


Software Construction Laboratory. (2) Laboratory, four hours; outside study, two hours. Requisite: course 31. Fundamentals of commonly used software tools and environments, particularly open-source tools to be used in upper division computer science courses. Letter grading.

M51A. Logic Design of Digital Systems. (4) (Same as Electrical Engineering M16.) Lecture, four hours; discussion, two hours; 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 structures. Number systems and arithmetic algorithms. Error control codes for digital information. Letter grading.

97. Variable Topics in Computer Science. (1 to 4) Lecture, one to four hours; discussion, zero to two hours. Designed for freshmen and sophomores. Variable topics in computer science not covered in regular computer science courses. May be repeated once for credit with topic or instructor change. Letter grading.

Upper Division Courses


112. Computer System Modeling Fundamentals. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Requisite: Statistics 100A or 110A. Designed for juniors/seniors. Probability and stochastic process models as applied in computer science. Basic mathematical tools in probability, combinatorics, conditional probability, expectation and higher moments, Bayes theorem, Markov chains. Applications include probabilistic algorithms, evidential reasoning, analysis of algorithms and data structures, reliability, communication protocol and queueing models. Letter grading.

113. Introduction to Distributed Embedded Systems. (4) Lecture, four hours; laboratory, four hours; outside study, four hours. Requisites: courses 111, 118. Introduction to basic techniques for the design, integration and implementation of distributed embedded systems. Topics include design implications of energy, time, and complexity. Network self-configuration and adaptation, localization and time synchronization, applications, and usage issues such as human interfaces, safety, and security. Heavily project based.

114. Peer-to-Peer Systems. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Recommended requisites: courses 32, 118. Optional: courses 111, 218. Fundamental concepts on peer-to-peer networks, such as distributed hash-tables, routing, searching, and related network management protocols (Join, Leave, death management, routing, table repair). Video streaming and Internet Protocol Television (IPTV) applications, such as PDAs and smart phones. Introduction to mesh-based and tree-based topologies for live streaming, with emphasis on peer selection metrics and illustration of common optimization techniques (peer capacity, network delay). Hands-on approach to guide students to development and testing of actual experimental systems on PlanetLab. Letter grading.

M117. Computer Networks: Physical Layer. (4) (Same as Electrical Engineering M117.) Lecture, two hours; discussion, two hours; laboratory, two hours; outside study, six hours. Not to be taken by 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 protocol stack. Systems include wireless LANs
communication and synchronization; design of parallel programs for scientific computation and distributed systems. Letter grading.

136. Introduction to Computer Security. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Requisites: courses 111, 118. Introduction to basic concepts of information security necessary for students. Topics include network security, security and privacy, cryptography, authentication, access control, authorization, cryptography, network security, secure application design, and ethics. Letter grading.

143. Database Systems. (4) Lecture, four hours; laboratory, two hours; outside study, six hours. Requisite: courses 111, 118. Introduction to basic database concepts and relational data systems. Topics include file organization, querying, transaction processing, concurrency control, and recovery. Letter grading.

144. Web Applications. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Requisites: courses 111, 118. Web applications and middleware for building effective and safe Web applications and first-hand experience with basic tools. Topics include basic language tools, programming in the server-side languages, Web pages, XML, and Perl/Shell. Letter grading.

151B. Computer Systems Architecture. (4) (Same as Electrical Engineering M116C.) Lecture, four hours; discussion, two hours; outside study, six hours. Requisites: courses 111, 118. An introduction to computing systems and the processes by which they are built. Topics include the history and evolution of computers, hardware and software, system performance and efficiency, and the impact of technology on society.


152A. Introductory Digital Design Laboratory. (2) (Same as Electrical Engineering M116L.) Laboratory, four hours; discussion, one hour; outside study. Requisites: course 151B or Electrical Engineering M116L. Design and implementation of basic digital circuits, including use of basic design tools for schematic capture and simulation, implementation of complex circuits using programmed array logic, design projects. Letter grading.

152B. Digital Design Project Laboratory. (4) Laboratory, four hours; discussion, two hours; outside study, six hours. Requisites: course 151B or Electrical Engineering M116C. Design and implementation of complex digital subsystems using field-programmable gate arrays (e.g., processing elements, peripheral processors, device controllers, and input/output interfaces). Students work in teams to develop and implement designs and to document and give oral presentations of their work. Letter grading.


170A. Mathematical Modeling and Methods for Computer Science. (4) Lecture, four hours; laboratory, two hours; outside study, six hours. Requisite: Mathematics 33B. Introduction to methods for modeling and decision making using the tools of linear programming, dynamic programming, and optimization. Emphasis on applications of simulation in physical systems. Letter grading.

M171L. Data Communication Systems Laboratory. (2 to 4) (Same as Electrical Engineering M171L.) Laboratory, four to eight hours; outside study. Two to four hours. Recommended preparation: course M152A. Limited to seniors. Interpretation of analog-signaling aspects of digital systems and data communications through experience in using contemporary test instruments to generate and display signals in relevant laboratory setups. Use of oscilloscopes, pulse and function generators, baseband spectrum analyzers, desktop computers, terminals, modems, PCs, and workstations in experiments on pulse transmission impairments, waveforms and their spectra, modal and terminal characteristics, and interfaces. Letter grading.

172. Introduction to Computer Animation. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Requisite: course 32. Basic principles behind modern two- and three-dimensional computer graphics systems, including those that allow modern graphics pipelines use to create realistic images in real time. How to position and manipulate objects in scene using geometric and camera transformations. How to create final image using perspective and orthographic transformations. Basics of modeling primitives such as polygonal models and implicit and parametric surfaces. Basics ideas behind color spaces, illumination models, shading, and textures. Letter grading.

174B. Introduction to Computer Graphics: Three-Dimensional Photography and Rendering. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Requisite: 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 entertainment (reverse engineering and postprocessing of movies, generation of realistic syntheses of objects and characters) to medicine (modeling of biological structures from imaging data), mixed reality (augmentation of video), and security (visual surveillance). Fundamental analytical tools for modeling and interpreting geometric (shape, reflectance, shading, and display); rendering and manipulating novel views. Letter grading.

C174C. Computer Animation. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Requisite: course 174A. Designed for juniors/seniors. Introduction to computer animation, including basic principles of character modeling, forward and inverse kinematics, forward and inverse dynamics, motion capture animation techniques, physics-based animation of particles and systems, and motor control. Concurrently scheduled with course C174D. Letter grading.
183. Introduction to Cryptography. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Preparation: knowledge of basic probability theory. Requisite: 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 pseudorandom permutations, semantic security, and private-key encryption, key-agreement, homomorphic encryption, private information retrieval and voting protocols, message authentication, digital signatures, interactive proof systems, zero-knowledge proofs, collision-resistant hash functions, commitment protocols, and two-party secure computation with static security. Letter grading.

CM184. Introduction to Computational and Systems Biology. (2) (Formerly numbered M186A.) (Same as Biomedical Engineering M184 and Computational and Systems Biology M184.) Lecture, two hours; outside study, four hours. Requisites: course 31 (or Program in Computer Science 31A, 31B). Same course designed to introduce students to computational and systems modeling and computation in biology and medicine, providing motivation, flavor, culture, and cutting-edge applications in computational biology and bioinformatics. Topics include: bioinformatics, computational genomics, 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 sciences problems at molecular, cellular (biological pathways), organ, and organism levels. Both theory- and data-driven modeling, with a focus on translating biomodeling goals and data into mathematics models and implementing them for simulation of numerical simulation algorithms, with modeling software exercises in class and lab assignments. Concurrently scheduled with course CM286. Letter grading.

CM187. Thesis Research and Research Communication in Computational and Systems Biology. (2 to 4) (Formerly numbered CM186C.) (Same as Biomedical Engineering CM187 and Computational and Systems Biology M187.) Lecture, one hour; discussion, two hours; laboratory, one hour; outside study, eight hours. Requisite: course CM186. Closely directed, interactive, and real research experience in active areas of computer science and engineering research laboratories. Emphasis 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 research for research results. Major emphasis on effective research reporting, both oral and written. Concurrently scheduled with course CM287. Letter grading.

188. Special Courses in Computer Science. (4) Lecture, eight hours; outside study, eight hours. Special topics in computer science 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. 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 method-ods 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 school approval. Individual contract required; enrollment petition available in Office of Academic and Student Affairs. Letter grading.

Graduate Courses

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 grade option.

202. Advanced Computer Science Seminar. (4) Seminar, four hours; outside study, eight hours. Preparation: completion of major field examination in computer science. May be repeated for credit. Letter grading.

211. Network Protocol and Systems Software Design for Wireless and Mobile Internet. (4) Lecture, four hours; outside study, eight hours. Requisite: course 31. Networking fundamentals, in-depth study of network protocol and systems software design in area of wireless and mobile Internet. Topics include (1) networking fundamentals: design philosophy of TCP/IP end-to-end arguments, and protocol design; (2) networking protocols: 802.11 MAC standard, packet scheduling, mobile IP, ad hoc routing, and wireless TCP; (3) mobile computing systems software: middleware, file system, services, and applications; and (4) topical studies: energy-efficient design, security, location management, and quality of service. Letter grading.


M213A. 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 design of embedded systems. Topics include hardware and software interfaces, system design techniques for modeling and specification of system behavior, software organization, real-time operating system scheduling, real-time scheduling, packet scheduling, low-power energy and communication 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.

M213B. Distributed Embedded Systems. (4) (Same as Electrical Engineering M202B.) Lecture, four hours; outside study, eight hours. Requisites: courses 111, and 118 or Electrical Engineering 132B. Designed for graduate computer science and electrical engineering students. Methodologies and technologies for design of distributed embedded systems needed to realize systems such as wireless sensor and actuator networks for monitoring and control of physical world. Topics include network design with localization and timing synchronization; energy-aware system design and operation; protocols for MAC, routing, transport, disruption tolerance; programming issues and models with language, OS, database, and middleware; in-network collaborative processing; fundamental characteristics such as coverage, connectivity, capacity, latency; techniques for exploitation and management of actuation and mobility; data and system integrity issues with calibration, faults, debugging, and security; and usage issues such as human interfaces and safety. Letter grading.

215. Computer Communications. (4) Lecture, four hours; outside study, eight hours. Requisite: course 112. Resource sharing; computer network characteristics; multiplexing; network structure; packet switching and other switching techniques; ARPANET and other computer network examples; network implementation and analysis; network optimization; network protocols; routing and flow control; satellite and ground radio packet switching; local networks; commercial network services and architectures. Optional topics include encryption, network security protocols, modern security management; social networking; advanced protocols; SMS; SSL/TLS, XML, etc.; protocol verification; network simulation and measurement; integrated networks; communication processors. Letter grading.

216. Distributed Multicore and Cloud Computing. (4) Lecture, four hours; outside study, eight hours. Requisites: courses 212A, 215. Topics from field of distributed control and access in computer networks, including terrestrial distributed computer networks; satellite network control; gateway networks; virtual private networks; local network architecture and control. Letter grading.

217A. Internet Architecture and Protocols. (4) Lecture, four hours; outside study, eight hours. Requisite: course 212A. Focus on current Internet research topics, including terrestrial distributed computer networks; satellite network control; gateway networks; virtual private networks; local network architecture and control. Letter grading.

217B. Advanced Topics in Internet Research. (4) Lecture, four hours; outside study, eight hours. Requisite: course 217A. Designed for graduate students. Overview of Internet development history and fundamental principles underlying TCP/IP protocol design. Discussion of current Internet research topics, including latest research results in routing protocols, transport protocols, network measurement, 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 as consequence of research interest. Students evaluate and study topics. May be repeated for credit with consent of instructor. Letter grading.
namic pipelining, superscalar and VLIW processors, branch prediction, speculative execution, software support for hardware design, static and dynamic compiler, fine-grain parallelism, simulation-based performance analysis and evaluation, state-of-art design examples, introduction to parallel architectures. Letter grading.

251B. Parallel Computer Architectures. (4) Lecture, tutorial, eight hours; outside study, eight hours. Requisite: course M151B. Recommended: course 251A. SIMD and MIMD systems, symmetric multiprocessors, distributed-shared-memory systems, messages-passing systems, multicore chips, clusters, interconnection networks, host-network interfaces, switching element design, communication primitives, cache coherence, memory consistency models, synchronization primitives, interconnection networks. Letter, pass/fail grading.


253C. Testing and Testable Design of VLSI Systems. (4) Lecture, four hours; outside study, eight hours. Requisite: course M51A. Detailed study of various physical design aspects of VLSI systems, including fault modeling, fault simulation, testing for single stuck faults and multiple stuck faults, functional testing, design for testability, compression techniques, and built-in self-test. Letter grading.

254A. Computer Memories and Memory Systems. (4) Lecture, four hours; outside study, eight hours. Requisite: course 251A. Generic types of memory systems: control, access modes, hierarchies, and allocation algorithms. Characteristics, system organization, and device considerations of ferroic memories, thin film memories, and semiconductor memories. Letter grading.

255A. Distributed Processing Systems. (4) Lecture, four hours; outside study, eight hours. Requisites: courses 215 and/or 251A. Task partitioning and allocation, interprocessor communications, task-replicated systems, process scheduling, message passing protocols, replicated file systems, interface, cache memory, actor model, fine grain multiprocessors, distributed operations, system kernel, error recovery strategy, performance monitoring and measurement, scalability and maintainability, prototypes and commercial distributed systems. Letter grading.

256A. Advanced Scalable Architectures. (4) Lecture, four hours; outside study, eight hours. Requisite: course M151B. Recommended: course 251A. State-of-art scalable multiprocessors. Interdependency among data and control, memory architecture, and system architecture. High-performance building blocks, such as chip multiprocessors (CMPs). On-chip and off-chip communication. Mechanisms for exploiting parallelism at multiple levels. Current research areas. Examples of chips and systems. Letter grading.

258C. LS1 in Computer System Design. (Same as Electrical Engineering 2516C.) Lecture, four hours; laboratory, eight hours. Letter, pass/fail grading. Requisite: course 252A. LS1/VLSI design and application in computer systems. In-depth studies of VLSI architec-tures and VLSI design tools. Letter grading.

258E. Foundations of VLSI CAD Algorithms. (4) Lecture, four hours; outside study, eight hours. Requisite: course Pre-pro, for one of the following areas: computer-aided design, verification, and synthesis. Introduction: one course in analysis and design of algo-rithms. Basic theory of combinatorial optimization for VLSI physical layout, including mathematical program-ming, network flows, matching, greedy and heuristic algo-rithms, and stochastic methods. Emphasis on practi-cal application to computer-aided physical design of VLSI circuits at high-level phases of layout: partitioning, placement, floorplanning, and global routing. Letter grading.

258F. Physical Design Automation of VLSI Systems. (4) Lecture, four hours; outside study, eight hours. Detailed study of various physical design automation problems of VLSI circuits, including logic parti-tioning, floorplanning, placement, global routing, channel and switchbox routing, planar routing and via mini-mization. Discussion of applications of number of important opti-mization techniques, such as network flows, Steiner trees, simulated annealing, and genetic algorithms. Letter grading.

258G. Logic Synthesis of Digital Systems. (4) Lecture, four hours; outside study, eight hours. Requisites: courses M51A, 180. Detailed study of various problems in digital systems logic synthesis, including two-level Boolean network optimization; multi-level Boolean network optimization; technology mapping for standard cell designs and field-programmable gate arrays; and sequential circuit synthesis examples, introduction to parallel architectures. Letter grading.

258H. Analysis and Design of High-Speed VLSI Interconnects. (4) Lecture, four hours; outside study, eight hours. Pre-requisite: course 258F. Detailed study of various problems in analysis and design of high-speed VLSI interconnects at both integrated circuit (IC) and packing levels, including interconnect capacitance and resistance, lossless and lossy transmission lines, cross-talk and power distribution noise, delay models and power dissipation models, interconnect topology and geometry optimization, and clocking for high-speed systems. Letter grading.

259. Current Topics in Computer Science: System Design/Architecture. (2 to 12) Lecture, four hours; outside study, eight hours. Review of current literature in area of system design/architecture in which instructor has developed special proficiency as consequence of research interests. Students report on select-ed topics. May be repeated for credit with topic change. Letter grading.

260. Machine Learning Theory. (4) Lecture, four hours. Preparation: basic knowledge of probability and ability to read and write mathematical proofs. Theoretical foundations underlying common machine learning algorithms. Topics include introduction to PAC learning model, uniform convergence theory, VC dimension, online learning, no-regret learning, online convex optimi-zation, two-level Boolean network optimization, SVMs, and connections to game theory. Letter grading.


262A. Reasoning with Partial Beliefs. (4) Lecture, four hours; outside study, eight hours. Requisite: course 112 or Electrical Engineering 131A. Review of several formalisms for representing and managing uncertainty in reasoning systems; presentation of compre-hensive description of Bayesian inference using belief networks representation. Letter grading.


262C. Causal Inference. (Same as Statistics 262C.) Lecture, four hours; outside study, eight hours. Requisite: course 112 or equivalent probability theory course. Techniques of using computers to interpret, summarize, and form theories of empirical observations. Mathematical analysis of trade-offs between computer complexity, and precision of computerized models. Letter grading.

262Z. Current Topics in Cognitive Systems. (4) Lecture, four hours; outside study, eight hours. Requisite: course 262A. Additional prerequisites for each offering announced in advance by department. Theory and implementation of systems that emulate or support human reasoning. Current literature and individual studies in artificial intelligence, knowledge-based systems, decision support systems, computational psychology, and heuristic programming theory. May be repeated for credit with topic change. Letter grading.

263A. Language and Thought. (4) Lecture, four hours; outside study, eight hours. Requisite: course 130 or 131. Introduction to natural language processing (NLP), with emphasis on semantics. Perception of process models, including question answering, paraphrasing, machine translation, word-sense disambiguation, narrative and editorial comprehension. Examination of both symbolic and statistical approaches to language processing and acquisi-tion. Letter grading.

263B. Connectionist Natural Language Processing. (4) Lecture, four hours; outside study, eight hours. Requisite: course 161 or 263A. Examination of connectionist/ANN architectures designed for natural language processing. Issues include localist versus distri-buted representations, variable binding, instantiation and inference via spreading activation, acquisition of language in connectionist models, and selection among two competing theories of language (viewed via back-propagation in PDP networks and competitive learning in self-organizing feature maps), and grounding of symbols in sensor/motor experience. Letter grading.

263C. Animals-Based Modeling. (4) Lecture, four hours; outside study, eight hours. Requisite: course 130 or 131 or 161. Animals are mobile/sensing animal-like software agents embedded in simulated dynamic environments. Emphasis on reinforcement-learning behavior via neurocontrollers, adaptation via reinforce-ment learning, evolutionary programming. Animat-based tasks include foraging, mate finding, predation, navigation, predator avoidance, cooperative nest construction, communication, and parenting. Letter grading.

264A. Automated Reasoning: Theory and Application. (4) Lecture, four hours; outside study, four hours. Requisite: course 161. Introduction to theory and practice of automated reasoning using propositional and first-order logic. Topics include syntax and semantics of formal logic; algorithms for logical reasoning, including satisfiability and entail-ment; syntactic and semantic restrictions on knowl-edge bases; effect of these restrictions on expressiveness, compactness, and computational tractability; app-lications of automated reasoning to diagnosis, planning, design, formal verification, and reliability analysis. Letter grading.

264A-5. Machine Learning. (4) Lecture, four hours; outside study, eight hours. Requisites: courses 262A. Additional requisites for each offering announced in advance by department. Theory and practice of automated reasoning using propositional and first-order logic. Topics include syntax and semantics of formal logic; algorithms for logical reasoning, including satisfiability and entailment; syntactic and semantic restrictions on knowledge bases; effect of these restrictions on expressiveness, compactness, and computational tractability; applications of automated reasoning to diagnosis, planning, design, formal verification, and reliability analysis. Letter grading.
M266B. Statistical Computing and Inference in Vision and Image Science. (4) (Same as Statistics M222B.) Lecture, three hours. Preparation: basic statistics, linear regression, analyses of variance and covariance. 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.

267A. Neural Models. (4) Lecture, four hours; outside study, eight hours. Designed for graduate students. Review of major neurophysiological milestones in understanding brain architecture and processes. Focus on brain theories that are important for modern computer science and, in particular, models of sensory perception, sensory-motor coordination, and cerebellar and cerebral structure and function. Students required to prepare papers analyzing research in one area of interest. Letter grading.

267B. Artificial Neural Systems and Connectionist Computing. (4) Lecture, four hours; outside study, eight hours. Designed for graduate students. Analysis of major connectionist computing paradigms and underlying models of biological and physical processes. Examination of past and current implementations of artificial neural networks with applications to associative knowledge processing, general multi-sensor pattern recognition including speed and vision, and adaptive robot control. Students required to prepare papers and doing research in one area of interest. Letter grading.


268S. Seminar: Computational Neuroscience. (2) Seminar, two hours; outside study, four hours. Designed for students undertaking thesis research. Discussion of current research in computational neuroscience. Neural networks and connectionism as paradigm for parallel and concurrent computation in application to problems of perception, vision, mental processes, control, and robotics. May be repeated for credit. S/U grading.

269. Seminar: Current Topics in Artificial Intelligence. (4) Seminar, to be arranged. Review of current literature and state of current research in artificial intelligence 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.


271C. Seminar: Advanced Simulation Methods. (2) Seminar, outside study, six hours. Requisite: course 271A. Discussion of advanced topics in simulation of systems characterized by ordinary and partial differential equations. Topics include (among others) simulation strategies, dataflow machines, array processors, and advanced mathematical modeling techniques. Topics vary each term. May be repeated for credit. Letter grading.

272. Advanced Discrete Event Simulation and Modeling Techniques. (4) Lecture, four hours; outside study, eight hours. In-depth study in discrete event simulation and modeling techniques, including building valid and credible simulation models, output analysis of systems, comparisons of alternative system configurations, variance reduction techniques, simulation models of computer systems and manufacturing systems. Letter grading.

273A. Digital Processing of Engineering and Statistical Data. (4) Lecture, four hours; outside study, eight hours. Computer methods for processing engineering and statistical data with emphasis on introduction to wavelet analysis, recursive filter functions, Fourier series, power spectral analysis, correlation computations, and statistical testing. Letter grading.

274C. Computer Animation. (4) Lecture, four hours; discussion, four hours; outside study, six hours. Requisite: course 174A. Introduction to computer animation, including basic principles of character modeling, forward and inverse kinematics, forward and inverse dynamics, motion capture animation techniques, and control. Currently scheduled with course C174C. Letter grading.

275. Artificial Life for Computer Graphics and Vision. (4) Lecture, four hours; outside study, eight hours. Enforced requisite: course 174A. Recommended: course 261. Investigation of important role that concepts and methodologies of a discipline that spans computational and biological sciences, can play in construction of advanced computer graphics and vision models for virtual reality, animation, interactive games, virtual environments, and medical image analysis, etc. Focus on comprehensive models that can realistically emulate variety of living things (plants and animals) from lower animals to humans. Exposure to effective computational modeling of natural phenomena of life and their incorporation into sophisticated, self-animating graphical entities. Specific topics include models of plants using L-systems, biomechanical simulation and control, behavioral animation, reinforcement and neural-network learning of locomotion, cognitive modeling, artificial animals and humans, human facial animation, and artificial evolution. Letter grading.

276A. Pattern Recognition and Machine Learning. (4) (Same as Statistics M231.) Lecture, three hours. Designed for graduate students. Fundamental concepts, theories, and algorithms for pattern recognition and machine learning that are used in computer vision, image processing, speech recognition, data mining, statistics, and computational biology. Topics include Bayesian decision theory, parametric and non-parametric learning, clustering, complexity (VC-dimension, MLD, AIC), PCA/ICA/CTCA, MDS, SVM, boosting. S/U or letter grading.

276B. Structured Computer Vision. (4) Lecture, four hours; outside study, eight hours. Designed for graduate students. Methods for computer processing of image data. Systems, concepts, and algorithms for image analysis, radiologic and robotic applications. Letter grading.

276C. Speech and Language Communication in Artificial Intelligence. (4) Lecture, four hours; outside study, eight hours. Requisite: M276A or M276B. Topics in human-computer communication: interaction with pictorial information systems, sound and symbol generation by humans and machines, semantic understanding, natural language understanding, and automatic interpretation. Use of speech and text for computer input and output in applications. Letter grading.

278. Probabilistic Models of Cognition. (4) (Same as Statistics M233B.) Seminar, three hours; discussion, one hour. Requisite: course 180, Mathematics 33A, or Statistics 100B. Modeling aspects of human cognition, designing artificial intelligence systems. Introduction to conceptual foundations and basic mathematical and computational techniques. Topics illustrated on different aspects of cognition. S/U or letter grading.

279. Current Topics in Computer Science: Methodology. (2 to 12) Lecture, four hours; outside study, eight hours. Review of current literature in area of computer science methodology 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.

280A-280ZZ. Algorithms. (4 each) Lecture, four hours; outside study, eight hours. Requisite: course 180. Additional requisites for each offering announced in advance by department. Selections from design, analysis, optimization, and implementation of algorithms; computational complexity and general theory of algorithmics; fundamental algorithms for problems in some domains. Subtopics of some current sections: Principles of Design and Analysis (280A); Distributed Algorithms (280D); Graphs and Networks (280G). May be repeated for credit with consent of instructor and topic change. Letter grading.

280AP. Approximation Algorithms. (4) Lecture, four hours; outside study, eight hours. Requisite: course 180. Background in discrete mathematics helpful. Theoretical and practical techniques for dealing with NP-hard problems. Inability to solve these problems efficiently means algorithmic techniques are based on approximation—finding solution that is near to best possible in efficient running time. Coverage of approximation techniques for number of different problems, with algorithm design techniques that include primal-dual method, linear program rounding, greedy algorithms, and local search. Letter grading.

281A. Computability and Complexity. (4) Lecture, four hours; outside study, eight hours. Requisite: course 181 or comparable background. Concepts fundamental to study of discrete information systems and theory of computing, with emphasis on regular sets of strings, Turing-recognizable (recursively enumerable) sets, closure properties, machine characterizations, nondeterminism, decidability, unsolvable problems, “easy” and “hard” problems, PTIME/NPTIME. Letter grading.

281D. Discrete State Systems. (4) Lecture, four hours; outside study, eight hours. Recommended requisites: course 181. Finite-state machines, transducers, and their generalizations; regular expressions, transduction expressions, realizability, decomposition, synthesis, and design considerations; topics in state and system identification and fault diagnosis, linear machines, probabilistic machines, applications in coding, communication, computing, control modeling, and simulation. Letter grading.

M282A. Cryptography. (4) (Same as Mathematics M209A.) Lecture, four hours; outside study, eight hours. Introduction to theory of cryptography, stressing rigorous mathematical foundations and proofs of security. Topics include notions of hardness, one-way functions, hard-core bits, pseudorandom generators, pseudorandom functions and pseudorandom permutations, semantic security, ciphertext-only and chosen-ciphertext attacks, secret sharing, message authentication, digital signatures, interactive proofs, zero-knowledge proofs, collision-resistant hash functions, commitment protocols, key-agreement protocols, contract signature schemes, and secure computation with static security. Letter grading.
M282B. Cryptographic Protocols. (4) (Same as Mathematics M209B.) Lecture, four hours; outside study, eight hours. Prerequisites: courses M280A-M280B. Cryptography: introduction to advanced cryptographic protocol design and analysis. Topics include noninteractive zero-knowledge proofs; zero-knowledge arguments; concurrent and non-black-box zero-knowledge; IP-PSpace completeness; stronger notions of security for public-key encryption, including chosen-ciphertext security; secure multiparty computation; dealing with dynamic adversary; nonmalicious parties; and composability of secure protocols; software protection; threshold cryptography; identity-based cryptography; private information retrieval; protection against man-in-middle attacks; voting protocols; digital cash schemes; lower bounds on use of cryptographic primitives, software obfuscation. May be repeated for credit with topic change. Letter grading.


M284A-M284Z. Topics in Automata and Languages. (4 each) Lecture, four hours; outside study, eight hours. Prerequisite: course 181. Models of computer programs and their languages. Formal models of computation; deterministic and nondeterministic finite automata; regular languages and regular expressions; context-free grammars; context-free languages; pushdown automata; Turing machines; recursive and recursively enumerable languages. Complexity, one-way functions, hardness amplification. Problems in computational number theory can be used to aid instruction in and outside of classroom. S/U grading.

M286. Computational Systems Biology: Modeling and Simulation of Biological Systems. (5) (Formerly numbered CM286B.) (Same as Biomedical Engineering CM287.) Lecture, one hour; discussion, two hours; laboratory, one hour; outside study, eight hours. Corequisite: Electrical Engineering 102. Dynamic biosystems modeling and computer simulation methods for studying biologically relevant phenomena at different levels of organization. Control systems, multicompartmental, predator-prey, pharmacokinetic (PK), pharmacodynamic (PD), etc. Software tools and approaches to problems. Choice of numerical algorithms for problems arising in many areas, such as reaction-diffusion partial differential equations, finite difference and finite element methods. Focus on computational models. Letter grading.

M288. Seminar: Theoretical Computer Science. (2) Seminar, two hours; outside study, six hours. Prerequisites: courses 280A, 281A. Intended for students undertaking thesis research. Discussion of advanced topics and current research in such areas as algorithms and complexity models for parallel and concurrent computation, and formal languages and automata theory. May be repeated for credit. S/U grading.

M289A-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 interests. Students report on selected topics. Letter grading.

M290C. Complexity Theory. (4, Lecture, four hours; outside study, eight hours. Prerequisite: course 180. Introduction to complexity theory, including basic classes and proof techniques for randomized algorithms, such as the polynomial hierarchy,-length boundedness of proofs, the class NP, randomized algorithms and the classes RP and BPP, probabilistic tradeoffs, and elements of the theory of interactive proof systems. Letter grading.

M290OA. Online Algorithms. (4) Lecture, four hours; outside study, eight hours. Prerequisite: course 180. Advanced topics in analysis of randomized algorithms and techniques for approximating solutions to NP-hard problems. Topics include techniques for the design and analysis of randomized algorithms, such as probabilistic trees, Markov chains, random walks, and probabilistic method. Applications to randomized algorithms in data structures, graph theory, computational geometry, number theory, and parallel and distributed systems. Letter grading.

M296A. Advanced Modeling Methodology for Dynamic Biomedical Systems. (4) (Same as Biomedical Engineering CM270C.) 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 models for applications in biology and medicine. Development of models for biomedical systems. Letter grading.

M296B, 296C. Optimal Parameter Estimation and Experiment Design for Biomedical Models. (4) (Same as Biometrics M270, Biomedical Engineering M296B, and Medicine M270D.) Lecture, four hours; outside study, eight hours. Prerequisite: course M296A. Recommended: course M289A. Research techniques and experience with special topics involving model development, model validation, and model application. Letter grading.

M296C. Advanced Topics and Research in Biomedical Systems Modeling and Computing. (4) (Same as Biomedical Engineering M296C and Medicine M270E.) Lecture, four hours; outside study, eight hours. Prerequisite: course M296A. Recommended: course M296B. Research techniques and experience with special topics involving model development, model validation, and model application. Approaches to solving problems in individual and group-centered problems. Letter grading.

M296D. Introduction to Computational Cardiology. (4) (Same as Biomedical Engineering M296D.) Lecture, four hours; outside study, four hours. Prerequisite: course CM186B. Introduction to mathematical modeling and computer simulation of cardiac electrophysiological process. Ionic models of action potential (AP). Theory of AP propagation in one-dimensional and two-dimensional cardiac tissue. Simulation on sequential and parallel supercomputers. Choice of numerical algorithms, to optimize accuracy and to provide computational stability. Letter grading.

M298. Research Seminar: Computer Science. (2 to 4) Seminar, two to four hours; outside study, four to eight hours. Limited to graduate computer science students. Discussion of advanced topics and current research in algorithmic processes that describe and analyze: memory and data structures; complexity, lower bounds, optimization; analysis of algorithmic processes that describe and analyze; and parallel supercomputers, choice of numerical algorithms, to optimize accuracy and to provide computational stability. Letter grading.

M299. 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 consultation and instruction at UCLA. May be repeated for credit. S/U grading.

M375. Teaching Assistant Training Seminar. (2) Seminar, two hours; outside study, six hours. Limited to graduate Computer Science Department students. Seminar on communication and organization of materials in classroom: preparation, organization of material, presentation, use of visual aids, grading, advising, assignment of grades. Letter grading.

M395B. Teaching with Technology. (2) Seminar, two hours; outside study, four hours. Limited to graduate Computer Science Department teaching assistants. Seminar for teaching assistants covering how technology can be used to aid instruction in and out of classroom. S/U grading.

M497D-497E. Field Projects in Computer Science. (4-4) Fieldwork, to be arranged. Limited to graduate computer science students. petition forms to request enrollment may be obtained from assistant dean. Petition forms to request enrollment may be obtained from assistant dean. S/U grading.

M596. Directed Individual or Tutorial Studies. (2 to 8) Tutorial, to be arranged. Limited to graduate computer science students. Petition forms to request enrollment may be obtained from assistant dean. Graduated Students. Supervised investigation of advanced technical problems. S/U grading.

M597A. Preparation for M.S. Comprehensive Examination. (2 to 12) Tutorial, to be arranged. Limited to graduate computer science students. Reading and preparation for M.S. comprehensive examination. S/U grading.

M597B. Preparation for Ph.D. Preliminary Examinations. (2-12) Tutorial, to be arranged. Limited to graduate computer science students. Preparation for Ph.D. preliminary examinations. S/U grading.

M597C. Preparation for Ph.D. Oral Qualifying Examination. (2 to 12) Tutorial, to be arranged. Limited to graduate computer science students. Preparation for Ph.D. oral qualifying examination, including preliminary research on dissertation. S/U grading.

M598. Research for and Preparation of M.S. Thesis. (2 to 12) Tutorial, to be arranged. Limited to graduate computer science students. Supervised independent research for M.S. candidates, including thesis proposal. S/U grading.


COMPUTING, PROGRAM IN
See Mathematics
CONSERVATION OF ARCHAEOLOGICAL AND ETHNODRACOGRAPHIC MATERIALS

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David A. Scott, Ph.D., Chair

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Jesse L. Byock, Ph.D. (Scandinavian)
Susan B. Downey, Ph.D. (Art History)
Robin L. Garrell, Ph.D. (Chemistry and Biochemistry)
Ioanna Kakoulli, D.Phil. (Materials Science and Engineering)
Gavin Lawrence, D.Phil. (Philosophy)
John K. Papanicolaou, Ph.D. (Classics)
Suzanne E. Paulson, Ph.D. (Atmospheric and Oceanic Sciences)
Ellen J. Pearlstein, M.A. (Information Studies)
David A. Scott, Ph.D. (Art History)
Lothar von Falkenhausen, Ph.D. (Art History)
Willeke Z. Wendrich, Ph.D. (Near Eastern Languages and Cultures)

Scope and Objectives

Students study for an M.A. degree in Conversa- tion of Archaeological and Ethnographic Materials, with emphasis on the multiple values and meanings that archaeological and ethnographic artifacts may hold for society, and how they impact decisions on the conservation and use of those materials. In the conservation philosophy that underpins the program, there is a strong interdisciplinary component, essential to effective working practices in the future. The three-year graduate program is a collaborative venture with the Getty Trust and is based in new facilities at the Getty Villa site in Malibu.

The aim of the program is to provide students with a solid educational base and practical training in both archaeological and ethnographic materials as well as an appreciation of the multiple values that artifacts hold for indigenous populations and foster a sense of partnership with indigenous communities in relevant aspects of the conservation process.

The partnership between UCLA and the Getty in creating the program ensures that both a major research university and an institution with a major mandate for conservation of the artistic heritage of the world are working to create a rich and vibrant conservation training opportunity. The program helps students develop working relationships with a wide array of colleagues in the Getty Conservation Institute, the J. Paul Getty Museum, and the UCLA Departments of Anthropology, Art History, Chemistry and Biochemistry, and Earth and Space Sciences, and the Interdepartmental Program in Archaeology.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://www.gdnet.ucla.edu/gasaalibrary/pgmrintro.htm. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degree

The Conservation of Archaeological and Ethnographic Materials Program offers a Master of Arts (M.A.) degree in Conservation of Archaeological and Ethnographic Materials.

Conservation of Archaeological and Ethnographic Materials

Graduate Courses

M210. Cultural Materials Science II: In Vitro Microscopy and Microanalysis. (4) (Same as Materials Science CM212.) Lecture, three hours; laboratory, two hours. Preparation: general chemistry, or inorganic and organic chemistry. Methodology of sampling and microanalysis of cultural materials for study of their morphology, microstructure, and composition by applying in vitro optical, chemical, and instrumental methods. Topics include optical and electron microscopy, X-ray and electron spectroscopy, X-ray diffraction, infrared spectroscopy, chemical spot tests, and chromatography. Hands-on experience through object-based problem-solving approach. Practical skills acquired on sampling and sample preparation methods of cultural materials and on analysis of microsamples using basic instruments for characterization of organic and inorganic compounds. Letter grading.

M215. Cultural Materials Science I: In-Situ Noninvasive Diagnostic Investigations and Documentation. (4) (Same as Art History M210.) Seminar, two hours; laboratory, three hours. Cultural heritage science is about understanding chemistry and technology of cultural materials and processes of deterioration and exploration of means to preserve these materials through application of technologies and knowledge from physical sciences and engineering. Introduction to first steps of scientific analysis and documentation of cultural materials for development of risk assessments by examining noninvasively their surface, subsurface, and interior. Topics include digital photogra- phy, diagnostic and forensic imaging (at wide spectral range), and portable spectroscopic methods for noninvasive material analysis at molecular and elemental level. Knowledge and practical skills to apply basic portable noninvasive techniques and instrumentation in field and laboratory and to appreciate potential contribution of more advanced imaging and spectroscopic tools. Letter grading.

M216. Science of Conservation Materials and Methods I. (4) (Formerly numbered 216.) (Same as Materials Science M216.) Seminar, one hour; laboratory, three hours. Recommended requisite: Materials Science M214. Introduction to the chemical, physical, and mechanical properties of conservation materials (employed for preservation of archaeological and cultural materials) and their aging characteristics. Science and application methods of traditional organic and inorgan-ic systems and introduction of novel technology based on biominerization processes and nanostructured materials. Letter grading.

M217. Conservation and Ethnography. (4) Laboratory, four hours. Designed for graduate conservation students. Introduction to work as conservators with indigenous repositories housing cultural collections. Students learn different models for tribal museums and cultural centers, and importance of material selection and properties in baskets they are treating. Letter grading.

M218. Issues in Preservation and Management of Archaeological and Cultural Sites. (4) Seminar, three hours. Designed to offer practical model of preservation and management planning for heritage sites that will be considered as scenarios. Adaptive management planning following iterative processes for sustainable heritage preservation addressing threats and challenges such as climate change 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 assessments to address potential risks in site preservation scenarios. Letter grading.


M220. Deterioration and Conservation of Organic Materials I. (4) Seminar, two hours; laboratory, three hours. Recommended requisite: Materials Science M220. Designed 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. Materials focus on bone, ivory, shell, horn, tortoise shell, leather, and plastics and rubber. Letter grading.


M226. Deterioration and Conservation of In-Situ Archaeological and Cultural Materials. (4) (Formerly numbered 236.) (Same as Materials Science M221.) Seminar, two hours; laboratory, three hours. Requisi- site, Materials Science M226, or Materials Science M250. (Or Art History M203F or Materials Science M215.) Deterioration processes (both natural and man-made) of in-situ and ex-situ archaeological and cultural decorative surfaces (mainly rock art, wall paintings, polychrome sculpture, decorative architectural elements, and mosaics) and on solutions to mitigate, pacify, or arrest decay mechanisms based on preventive, passive, and reactive solutions (latter based on minimum intervention). Sessions include holistic approaches for preservation of archaeological sites; hydrology of sites; origin and damaging effects of salts; biodegradation; chemical and mechanical weathering; earthquakes, frost, flooding, and vandalism; structural repairs, grouting, cleaning, and desalination; sheltering and limited accessibility; fixing, consolidation, and protective surface treatments. Letter grading.
DANCE
See World Arts and Cultures/Dance

DENTISTRY
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No-Hee Park, D.D.S., M.S.D., Ph.D., Dean

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.

DENTISTRY
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Professors
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Willemin Henri Lucas, B.A.
Peter B. Lunenfeld, Ph.D.
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Vasa V. Minh
Christian A. Moeller, Dipl. – ING
C.E.B. Reas, M.S.
Jennifer J. Steinkamp, M.F.A.
Victoria Vesna, M.F.A., Ph.D.

Professors Emeriti
James W. Bassler, M.A.
William C. Brown, M.A.
Mitsuru Kataoka, M.A.
J. Bernard Kester, M.A.
Lionel J. March, Sc.D.
John A. Neuhart

Associate Professor
Eddo I. Stern, M.F.A.

Assistant Professor
Ramesh Srinivasan, Ph.D.

Scope and Objectives
The Department of Design | Media Arts offers the Bachelor of Arts and Master of Fine Arts degrees. The B.A. degree focuses on visual communication design, with emphasis on digital media. The M.F.A. degree focuses on media arts. These uniquely challenging programs invite students to balance aesthetic sensibility with logical reasoning, formal theories with 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 20 students, which encourages individual growth and fosters a sense of community within the department.

The two-year Master of Fine Arts (M.F.A.) 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's equipment combines high-end PC and Macintosh computers with facilities for sound and video editing.

The Department of Design | Media Arts reserves the right to hold for exhibition purposes any examples of work done in classes and to retain for the permanent collection of its galleries such examples as may be selected.

Undergraduate Study

Design | Media Arts B.A.

Preparation for the Major

Required: Design | Media Arts 10, 11A, 11B, 21, 22, 23, 24, 25, 28.

The Major

Required: Nine upper division courses, including Design | Media Arts 101, 104, 153A, 154A, 161A, four additional graphics. The selected from 152A through 162, and a minimum of 12 additional upper division elective units selected from C106 through 199. By petition and with approval of the faculty adviser, nonmajor courses may be applied toward major electives. 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, http://www.gdnet.ucla.edu/gasaa/library/pgmqrintro.htm. 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 Design | Media Arts offers the Master of Fine Arts (M.F.A.) 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 limit. 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 customized homepages with Macromedia Director and Flash software. Photographic scanning and manipulation of images in Adobe Photoshop to incorporate student Web designs. Critique of various approaches to analyze successful use of Web design and understand enormous potential of Internet. May be repeated for credit without limitation. Offered only as part of Summer Institute. P/NP grading.

3. Game Design. (2) Studio, 30 hours. Limited to high school students. Design and creation of student digital games, beginning with storyboard and learning how to bring game design to life. Creation and animation of three-dimensional characters and objects by using Maya, same software used by professional game developers. Analysis of popular games to understand what is involved in producing modern games. Visits from professional game designer to help guide students in creating their own game designs. May be repeated for credit without limitation. Offered only as part of Summer Institute. P/NP grading.

4. Audio Video Design. (2) Studio, 30 hours. Limited to high school students. Design and creation of student digital games, beginning with storyboard and learning how to bring game design to life. Creation and animation of three-dimensional characters and objects by using Maya, same software used by professional game developers. Analysis of popular games to understand what is involved in producing modern games. Visits from professional game designer to help guide students in creating their own game designs. May be repeated for credit without limitation. Offered only as part of Summer Institute. P/NP grading.

5. Art/Science and Technology Studio/Laboratory. (4) Studio/laboratory, 30 hours. Limited to high school students. Two-week summer course, including lectures, required screenings, laboratory visits, field trips, and outside study. Exploration of creative aspects of scientific research and innovation to gain broad understanding 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.

6. Art/Science and Technology Studio/Laboratory. (4) Studio/laboratory, 30 hours. Limited to high school students. Two-week summer course, including lectures, required screenings, laboratory visits, field trips, and outside study. Exploration of creative aspects of scientific research and innovation to gain broad understanding 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. Typography. (4) Lecture, two hours; screenings, two hours; discussion, one hour; outside study, 11 hours. Introductory course to explore media arts (artworks applying new media technology) and their relationship to culture and society. Students gain broad understanding of media arts from early experiments by futurists and constructivists to most recent phenomena like game art and artistic experiments with wearable and portable media. Development of critical awareness toward pervasive impact of media on everyday life, leading to active, critical, and personalized understanding of mediated world. P/NP or letter grading.

9. 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 lectures. Emphasis on art projects that use technology and respond to new scientific concepts. P/NP or letter grading.

10. Design Culture: Introduction. (5) Lecture, three hours; outside study, 12 hours. Open to nonmajors. Understanding design process and emphasis on development of visual language; study of historic, scientific, technological, economic, and cultural factors influencing design in our physical environment. P/NP or letter grading.

11A. Design History I. (5) Lecture, three hours; outside study, 12 hours. Requisite: course 10. Survey of evolution of design for mass production from mid-19th century to 1930 in Western Europe and North America. Investigation of wide range of objects of design, including industrial and product design, with focus on graphic design as mirror of social, cultural, and technological ideas within broadly defined cultural context. Particular attention to topics such as designer’s role in production of visual environment, development of design in context of other kinds of visual media, age-old question of art versus design, and many other arguments and theories that continue to echo through contemporary practice. P/NP or letter grading.

11B. Design History II. (5) Lecture, three hours; outside study, 12 hours. Focus on graphic design primarily in U.S. from 1930 to 1990. Beginning with proposition that there is no one way to practice or analyze contemporary design, lectures focus on evolution of range of issues that include role of designer, practice of design, and consumption of design. Design as art, service, science, politics, and other definitions of practice — and investigation of physical realizations of those practices as way to understand pluralities of design today. P/NP or letter grading.

21. Color. (4) Studio, six hours. Introduction to theories of color to understand interdependence and interrelation of color and form, color and quantity, color and placement, and after-image. P/NP or letter grading.

22. Form. (4) Studio, six hours. Interrelation of two-dimensional surfaces and threedimensional 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. 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. Typography. (4) Studio, six hours; outside study, six hours. Focus on three typographic basics: letter, text, and grid. Introduction to fundamentals of typogra- phy. Assignments designed to develop understanding of form, scale, and shape of letters as single elements and as texture in layout. Emphasis on grid (structure and layout) and information hierarchy by means of successful typographic messages. P/NP or letter grading.

28. Interactivity. (4) Studio, six hours; outside study, six hours. Introduction to concept of interactivity and field of media art that follows history of computer as medium for artistic exploration of relation to print, animation, and interactivity. Discussion of potential and ideas related to interactivity, with focus on required skills for creating interactive work. Development of programming skills in service of creative media art. Concepts and skills taught enhance student ability to excel in future courses about Internet, animation, interactive media, and game design. Discussion and
readings on four themes — form/programming, motion, interactivity/programming, and interface. P/NP or letter grading.

Upper Division Courses

101. Media Arts: Introduction. (5) Lecture, three hours; outside study, 12 hours. Limited to and required of Design I Media Arts majors. Survey of media arts, their historical and cultural roles from the 18th century to present. Investigation of media arts within broad historical and cultural framework. Discussion of parallels and links with other cultural forms, including historical works. Poetry, and various art and design practices, P/NP or letter grading.

102. Introduction to Digital Image Creation and Manipulation. (5) Lecture; three hours; outside study, 12 hours. Overview of digital imaging technology and its applications, presentations, discussions, and critiques from both technical and content-based points of view. P/NP or letter grading.

104. Design and Society; Society and Design. (5) Lecture and studio, 12 hours. Preparation: completion of preparation for major courses. Open to nonmajors with consent of instructor. Historical and thematic examination of how design affects society. Enforced prerequisite: course 153A. Introduction to digital design, lighting, staging, camera movement and positioning, editing, sound, and marketing. May be repeated once for credit. P/NP or letter grading.

153A. Video 1. (5) Studio, six hours; outside study, nine hours. Requisite: course 152A. Use of video technology to create digital short film from design perspective. Emphasis on design theories behind production design, lighting, staging, camera movement and positioning, editing, sound, and marketing. May be repeated once for credit. P/NP or letter grading.

154A. Visual Communication 1. (5) Studio, six hours; outside study, nine hours. Preparation: completion of preparation for major courses. Emphasizes: course 101 or 104 or C106. Focus on relationship of type to content; development of knowledge of and sensitivity to typography in context of complex communication problems in print and digital media. Research, concept and content development, and articulation of methodology for visualization, P/NP or letter grading.

154B. Visual Communication 2. (5) Studio, six hours; outside study, nine hours. Enforced requisite: coursework 101 or C104 and C154. Integration of print and digital information technology, with continued emphasis on visual vocabulary, mastery of conceptual and creative procedures. P/NP or letter grading.

156A. Three-Dimensional: Modeling and Motion 1. (5) Studio, six hours; outside study, nine hours. Preparation: completion of preparation for major courses. Enforced requisite: course 101 or 104 or C106. Through lectures, discussions, and studio work, introduction to basic elements of three-dimensional computer visualization, including modeling, image viewing, lighting, project construction, and rendering. P/NP or letter grading.

156B. Three-Dimensional: Modeling and Motion 2. (5) Studio, six hours; outside study, nine hours. Preparation: completion of preparation for major courses. Enforced requisite: coursework 101 or 104 or C106, and 156A. Extension of study of virtual three-dimensional form to include motion, time, and rhythm. Storyboard development, modeling of articulated characters and objects, virtual camera movement, and motion capture. May be repeated once for credit. P/NP or letter grading.

157A. Gaming 1. (5) Studio, six hours; outside study, nine hours. Preparation: completion of preparation for major courses. Enforced requisite: course 101 or 104 or C106, and 157A. Extension of study of interactive media design. Focus on development of advanced conceptual skills in interface design and nonlinear narrative utilizing programming techniques such as lists and objects. Builds on skills and concepts acquired in course 157A. May be repeated once for credit. P/NP or letter grading.

157B. Gaming 2. (5) Studio, six hours; outside study, nine hours. Preparation: completion of preparation for major courses. Enforced requisite: courses 101 or 104 or C106, and 157A. Extension of study of interactive media design. Focus on development of advanced conceptual skills in interface design and nonlinear narrative utilizing programming techniques such as lists and objects. Builds on skills and concepts acquired in course 157A. May be repeated once for credit. P/NP or letter grading.

158. Environmental Communication. (5) Studio, six hours; outside study, nine hours. Preparation: completion of preparation for major courses. Enforced requisite: course 101 or 104 or C106, and 157A. Environmental Communication: introduction to environmental communication design through experience in design studio. Focus on aesthetic issues concerning creation of design elements, in the context of space, dimension, human/environmental scale, motion, and time. Overview of history, technologies, and future of environmental graphics. P/NP or letter grading.

182. Design Processes. (5) Studio, six hours; outside study, nine hours. Preparation: completion of preparation for major courses. Enforced requisite: course 101 or 104 or C106, and three courses from 153A through 158. Limited to seniors. Individual studies organized by and personalized for students. Proposal for research and development of design and production of body of work. May be repeated once for credit. Letter grading.


185. Introductory Design. (5) Studio, six hours; outside study, nine hours. Enforced requisite: course 101 or 104 or C106, and three courses from 153A through 158. Limited to seniors. Individual studies organized by and personalized for students. Proposal for research and development of design and production of body of work. May be repeated once for credit. Letter grading.

193. Special Topics in Area Studies. (5) Studio, six hours; outside study, nine hours. Preparation: completion of preparation for major courses. Enforced requisite: course 101 or 104 or C106. Topics in design and media arts explored through variety of approaches that may include readings, discussion, research papers, and oral presentations. Topics announced in advance. May be repeated for maximum of 15 units. Only 10 units may be applied toward area studies. Letter grading.


191B. Network Media 2. (5) Studio, six hours; outside study, nine hours. Enforced requisite: course 161A. Intermediate-level course exploring creative production through digital tools and web-technologies, with a focus on Online Media. Builds on skills and concepts acquired in course 161A. May be repeated once for credit. Letter grading.

191C. Network Media 3. (5) Studio, six hours; outside study, nine hours. Enforced requisite: course 161A. Intermediate-level course exploring creative production through digital tools and web-technologies, with a focus on Online Media. Builds on skills and concepts acquired in course 161A. May be repeated once for credit. Letter grading.

192. Sound. (5) Studio, six hours. Enforced preparation: completion of preparation for major courses. Limited to seniors. Basic concepts of sound and digital audio; exploration of how sound impacts human perception. Emphasis on learning practical techniques in creating original sound assets for integration with other media. Topics include physics of sound, DAW (Digital Audio Workstation), recording tools and techniques, electronic sound synthesis, MIDI (Musical Instrument Digital Interface), digital audio formats and standards, how we hear, sound and impact on human orientation. Basic understanding of how to conceptualize and execute sound designs. Students learn techniques to create original sound design elements at intermediate level. Letter grading.

194. Topics in Design I Media Arts. (2 to 8) Lecture, four hours. Examination by faculty members of specific problems relevant to design theory and performance. Topics announced in advance. May be repeated for maximum of 16 units. Letter grading.

195A-195B. Community or Corporate Internships in Design I Media Arts. (6 to 12) Studio, six hours; outside study, nine hours. Introduction to early development of tools, cloth, shelters, symbols, and embellishments. P/NP or letter grading.

195A. Community or Corporate Internships in Design I Media Arts. (6 to 12) Studio, six hours; outside study, nine hours. Introduction to early development of tools, cloth, shelters, symbols, and embellishments. P/NP or letter grading.

196. Theory and Practice of Design. (5) Studio, six hours; outside study, nine hours. Emphasis on conceptual design and media arts explored through variety of approaches that may include readings, discussion, research papers, and oral presentations. Topics announced in advance. May be repeated for maximum of 15 units. Only 10 units may be applied toward area studies. Letter grading.
200. Design | Media Arts Faculty Seminar. (2) Seminar, two hours. Limited to design | media arts students. Designed to familiarize new graduate students with departmental faculty members and their creative work and research to help students select their faculty advisers. S/U or letter grading.

201. Media Arts: Introduction. (5) Lecture, three hours; outside study, 12 hours. Limited to and required of Design I Media Arts majors. Survey of media arts, their history, aesthetic, and cultural roles from 19th to 20th 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. S/U or letter grading.

206. Media Studies. (5) Lecture, three hours; outside study, 12 hours. Designed for graduate design I media arts students. Overview and contextual understanding of current issues in medias, communication paradigms, and technologies of past 150 years through reading and discussion of theoretical and historical works. May be repeated for credit with consent of adviser. Concurrently scheduled with course C106. Letter grading.

207. Mathematical Techniques in Design and Media Arts I. (4) Lecture, three hours. Designed for graduate students. Survey of mathematical techniques used in design and computation theory. Sets, relations, posets, lattices, Boolean and Heyting algebras, formal languages and production systems. May be repeated for credit with consent of adviser. Letter grading.

211. Mathematical Techniques in Design and Media Arts II. (4) Lecture, three hours. Designed for graduate students. Survey of mathematical techniques used in design and computation theory. Theory of descriptive geometry, spatial transformations, matrix representations, symmetry and groups, graphs, maps and triangulations. May be repeated for credit with consent of adviser. Letter grading.

242. Introduction to Geometric Modeling. (4) (Formerly numbered CM242.) (Same as Architecture and Urban Design M227A.) Lecture, three hours; outside study, nine hours. Introductory course in logic of computing through experiments in computer graphics programming. Investigation of both procedural and object-oriented approaches to programming. May be repeated for credit with consent of adviser. S/U or letter grading.

243. User Interaction Techniques in Design. (4) (Formerly numbered CM243.) (Same as Architecture and Urban Design M227C.) Lecture, three hours; outside study, nine hours. Requisite: course M241 or knowledge of C++ programming language. Programming techniques for implementing modern computer user interfaces, specifically looking at issues relevant to building software tools for computer-aided problem solving in architecture and design. May be repeated for credit with consent of adviser. S/U or letter grading.

249. Advanced Seminar: Computer Applications. (4) Seminar, three hours. Requisite: course M241 or Architecture and Urban Design M227A. Survey of various roles computers may play in design; development of new applications and tools; student projects that involve search, evaluation functions, and communication. May be repeated for credit with consent of adviser. S/U or letter grading.

252A. Programming Media 1. (5) Studio, six hours; outside study, nine hours. Limited to majors. Introduction to computer programming within context of art and design. Exploration of conceptual space enabled by electronic media through exercises, presentations, discussions, and critiques. Weekly exercises balance concept and technique to reveal potential of computer as medium and tool. Experience with programming basics includes procedural and object-oriented programming, two- and three-dimensional graphics, file I/O, color models, and image processing. Letter grading.

252B. Programming Media 2. (5) (Formerly numbered CS252B.) Studio, six hours, outside study, nine hours. Limited to majors. Computer programming to develop dynamic interactive art and design. Exploration of conceptual space to be enabled by electronic media through exercises, presentations, discussions, and critiques, culminating in self-motivated final project. Prototyping with diverse software materials and advanced programming techniques. May be repeated once for credit. Letter grading.

254. Introductory Studio. (4) Lecture/studio, six hours. Designed for graduate design I media arts majors. Emphasis on creation of dynamic, digital, and linear works through integration of typography, photography, video, graphics, animation, and sound. May be repeated for credit with consent of adviser. Letter grading.

256. Interactive Environments. (4) Lecture/studio, six hours. Requisites: courses 201 or C206, 254. Designed for graduate design I media arts majors. Emphasis on comprehension of fundamental principles of interactivity and networked environments. May be repeated for credit with consent of adviser. Letter grading.

258. Current State of Technology. (4) Lecture/studio, six hours. Designed for graduate design I media arts majors. Introduction to state-of-art software programs and techniques necessary for design of interactive and multimedia applications. May be repeated for credit with consent of adviser. Letter grading.

259. Data and Media Arts. (4) (Same as Statistics M237.) Studio, six hours. Requisites: courses 254, 256. Through expanding reach of telecommunications networks and general advancement of data collection technologies, almost every aspect of our lives can be “rendered” in data. Contemplation of use of data in creation of media art and examination of each step in process of data collection, analysis, and representation. Topics include databases and data warehousing, exploratory analysis and visualization, clustering and pattern finding, sampling, and various data mining algorithms. Exploration, through discussions, of fundamental concepts related to data mining, randomness, Techniques that organize data, search for patterns, and create meaningful and/or expressive representations. Letter grading.

269. Graduate Seminar. (4) Seminar, four hours. Designed for graduate design I media arts majors. Survey of critical theories in media art and design. Critical examination of student work by peers, faculty members, and expert guests, culminating in self-motivated final project. May be repeated for credit with consent of adviser. Letter grading.

270. Media Arts Theory. (5) Lecture, three hours. Enforced requisite: course 201. Media arts is rapidly emerging phenomenon within wider field of contemporary art, yet has been theorized fairly little. While there are numerous books chronicling its past and present forms, there is much less writing about its theoretical and aesthetic underpinnings. Uncertainties begin with concept itself: what is actually meant by media arts? Letter grading.

271. Media Archaeology. (5) Lecture, three hours. Enforced requisite: course C206. Media archaeology is emerging approach within media studies, aiming to excavate little known or misrepresented media cultural phenomena of past, shedding light on apparatus that have been overlooked and/or suppressed by hegemonic versions of media history. Letter grading.

272. Introduction to Art I Science. (5) Seminar, three hours. Enforced requisite: course C206. 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.

277. Form and Structure. (2 to 8) Studio or studio/seminar, to be arranged. Exploration of form, with emphasis on expressive experimentation in materials and processes. May be repeated for credit with consent of adviser. Letter grading.

278. 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.

401. Design I Media Arts Studio I. (2 to 8) Studio, to be arranged. Limited to first-year graduate design I media arts students. Introduction to advanced experimentation and integration of media, technologies, and concepts, with emphasis on development of design work of individual graduate students. May be repeated for credit with consent of adviser. Letter grading.

402. Design I Media Arts Studio II. (2 to 8) Studio, to be arranged. Requisites: courses C206, 254, 256, 401. Continuation of advanced design research based on experimentation integrated into disciplined approach to design process. Focus on development of comprehensive body of work. Emphasizes forms basis of M.A. thesis exhibition. May be repeated for credit with consent of adviser. 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.

598. M.A. Research and Thesis Preparation. (4 to 12) Tutorial, to be arranged. Designed for second-year M.A. students. May not be applied toward minimum graduate course or unit requirements for M.A. degree. May be repeated for credit. S/U grading.
DIGITAL HUMANITIES
Interdisciplinary Minor
College of Letters and Science

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Todd S. Presner, Ph.D., Chair

Faculty Committee
Diane G. Favro, Ph.D. (Architecture and Urban Design)
Christopher Johanson, Ph.D. (Comparative Literature, Germanic Languages)
Janice L. Reiff, Ph.D. (History, Statistics)
Willeke Z. Wendrich, Ph.D. (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 at http://www.dthumanities.ucla.edu or from Kerry Allen, 212 Royce Hall. To submit an application for the minor, see the website and click on DH Minor.

Required Lower Division Course (4 to 6 units):

Required Upper Division Courses (27 to 30 units):

No more than two upper division courses (8 to 10 units) may be applied toward both this minor and a major or minor in another department or program.

Each minor course must be taken for a letter grade. Successful completion of the minor is indicated on the transcript and diploma.

Digital Humanities

Upper Division Courses

101. Foundations of Digital World. (5) Lecture, four hours; discussion, one hour. Foundation course for students in Digital Humanities minor, providing them with theoretical and conceptual framework for understanding genesis of digital world. Use of contemporary cultural-historical 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 World Wide Web and their impact on how individuals, groups, and cultures experienced their worlds. Letter grading.

132. World of Letters. (5) Lecture, discussion, one hour. Survey of literature, forming what is often misconceived as an aberration of daily life into one of its most basic realities. Faculty members from applied fields in the professional schools (e.g., education, law, medicine, nursing, public health, public policy, and urban planning) collaborate with faculty from academic disciplines across the College of Letters and Science and the School of the Arts and Architecture (e.g., anthropology, English, history, linguistics, psychology, and world arts and cultures) to provide a critical framework for questioning and connecting topics related to disability in these established disciplines.

Through a core course, carefully selected electives, a required two-term internship or research apprenticeship, and a senior capstone project, students in the minor obtain both breadth and depth in their understanding of the concept and practical implications of disability.

194. Research Group Seminars: Digital Humanities. (2) Seminar, two hours. Requisites: course 101, completion of two other minor courses. May be taken concurrently with course 195 or 196. Designed for undergraduate students who are part of research group. Discussion of research methods, tools, and current literature in field or of research of faculty members and students. May be repeated for credit. P/NP grading.

195. Community or Corporate Internships in Digital Humanities. (4) Tutorial, two hours; fieldwork, eight hours. Limited to juniors/seniors. May be taken concurrently with course 194. Internship in supervised setting in community or corporate setting to be arranged by instructor. 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. Letter grading.

196. Research Apprenticeship in Digital Humanities. (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 grading.

198. Honors Research in Digital Humanities. (4) Tutorial, one hour. Requisite: course 194. 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. Letter grading.

DISABILITY STUDIES
Interdisciplinary Minor
College of Letters and Science

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tel: (310) 206-1275
e-mail: disabilitystudies@college.ucla.edu
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Victoria E. Marks, B.A., Chair

Faculty Committee
Emily K. Abel, Ph.D. (Health Services, Women's Studies)
Bruce L. Baker, Ph.D. (Psychology)
Helen Deutsch, Ph.D. (English)
Rachel C. Lee, Ph.D. (English, Women's Studies)
Victoria E. Marks, B.A. (World Arts and Cultures/ Dance)
Mary J. O'Connor, Ph.D. (Psychiatry and Biobehavioral Sciences)

Scope and Objectives

The Disability Studies minor introduces undergraduate students to the emerging interdisciplinary field of disability studies, offering a new lens for thinking about the body, society, and culture. The field reorients a marginalized phenomenon at the center of our experience, transforming what is often misconceived as an abnormality of daily life into one of its most basic realities. Faculty members from applied fields in the professional schools (e.g., education, law, medicine, nursing, public health, public policy, and urban planning) collaborate with faculty from academic disciplines across the College of Letters and Science and the School of the Arts and Architecture (e.g., anthropology, English, history, linguistics, psychology, and world arts and cultures) to provide a critical framework for questioning and connecting topics related to disability in these established disciplines.

Through a core course, carefully selected electives, a required two-term internship or research apprenticeship, and a senior capstone project, students in the minor obtain both breadth and depth in their understanding of the concept and practical implications of disability.

198. Honors Research in Digital Humanities. (4) Tutorial, one hour. Requisite: course 194. 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. Letter grading.

199. Directed Research in Digital Humanities. (4) Tutorial, one hour. Requisite: course 194. 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. Letter grading.
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 supporting 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 adviser. Applications are available at and must be filed with the Undergraduate Education Initiatives Office, A265 Murphy Hall. For information and questions, e-mail disabilitystudies@college.ucla.edu or call (310) 825-3223.

Required Upper Division Courses (13 to 15 units): Disability Studies 101 and two elective courses.

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. Internship credit for students participating in the UC Center Sacramento (UCCS) program or the Center for American Politics and Public Policy (CAPPP) program may be substituted by petition and is subject to approval by the faculty committee.

Required Upper Division Capstone Courses (8 to 10 units): Disability Studies M194 with a grade of B or better, and 198 or 199. Prior to enrolling in course 198 or 199, students must complete Disability Studies M194 and all other requirements for the minor.

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 under the guidance of a faculty sponsor and enroll in either Disability Studies 198 or 199 in the final term of the minor. 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.

No more than one upper division course may be applied toward both this minor and a major or minor in another department or program.

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
Upper Division Courses

101. Perspectives on Disability Studies. (5) Seminar, three hours. 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 units and to create their own perspectives on disability in field that defines itself by how it changes. Letter grading.

102. Disability and Violence. (4) Seminar, three hours. Relationship between disability and violence from three angles: (1) review of disproportionate incidence of violence committed against people with disabilities, whether specifically as form of hate crime or based on dependency and/or vulnerability that accompany some types of disability, (2) study of role of disability in various mental illnesses in representations of criminality and violence, and (3) disablist or emergent disability (injuries, illnesses, and impairments created by social inequality) as consequence of intersectional forms of discrimination, social subordination, or as result of state or interpersonal violence. Consideration of possible coalition-based strategies for challenging systemic subordination and prospects for improving disability-consciousness across social movement efforts and campaigns. P/NP or letter grading.

120. Topics in Literature and Disability. (5) Seminar, three and one half hours. Limited to juniors/seniors. Ways in which disability is made visible in literature, with particular attention to various roles, positions, and concerns of people with disabilities. Approaches may be intersectional, exploring how social categories of gender, class, race, ethnicity, religion, age, sexuality, nationality, and citizenship affect and are affected by disability. Topics may include autobiography, disability history, fiction, poetry, and drama, as well as themes related to such problems as stigma, gender politics, or interethnic encounters. May be repeated for credit with different topic and instructor change. P/NP or letter grading.

M121. Topics in Gender and Disabilities. (4) (Same as Women’s 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 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), representation (arts, literature), education, public policy, health. May be repeated for credit with different topic and instructor change. P/NP or letter grading.

M130. Disability Policy and Services in Contemporary America. (4) (Same as Social Welfare M165.) Lecture, three hours. Limited to juniors/seniors. Growing numbers of people 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 policies continue to influence evolving public policy responses? P/NP or letter grading.

M139. Representing Autism. (4) (Same as Psychology M139.) Seminar, three and one half hours. Students build critical awareness of autism as a culturally contingent and culturally inflected and move beyond solely medical or deficiency model of autism to recognize this new categorization of disability as produced by and produced for new discursive, ideational and practices. Discussion of what ramifications of these multiple framings are in context of autism and disability intervention, policy, and theory today. Letter grading.

M157. Rechoreographing Disability. (Same as Dance 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 writing 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 motion as well as choreography as poetic form for expression of ideas, creative tool, or product. Viewing and discussion of work, and embodying ideas through movement and dance.

M194. Capstone Research Seminar. (2) (Formerly numbered 194.) (Same as Civic Engagement M194.) Seminar, two hours. Enforced requisite: course 195A or 195B. 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 field and academic coursework, with supervising faculty member required. 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 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.


198. Honors Research in Disability Studies. (6 to 8) Tutorial, one hour. Enforced requisite: course 194. Limited to juniors/seniors. Required capstone course to Disability Studies minor for students pursuing College Honors. 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. Senior Project in Disability Studies. (6 to 8) Tutorial, one hour. Enforced requisite: course 194. Limited to juniors/seniors. Required capstone course to Disability Studies minor. Supervised individual research or investigation under guidance of faculty mentor. Culminating paper or project required. May be repeated for credit. Individual contract required. Letter grading.
The disciplines of geology, geochemistry, geophysics, paleobiology, and space physics are concerned with the structure and evolution of the solar system, Earth, and life: essentially, the physical environment and its interaction with biota. These studies entail the application of fundamental physics and chemistry to a broad subject area stretching from astronomy at one extreme to biology at the other. Areas that are emphasized at UCLA include isotope and trace element analyses, petrology and mineralogy, sedimentology, paleontology, and organic geochemistry, structural geology and tectonophysics, seismology, the Earth’s interior, planetary physics, and space plasmas.

The variety of techniques applied lead to several concentrations within the five main disciplines. Students completing their studies with a B.S. or M.S. degree usually are employed by industry. Many are employed in environment-related activities; others are involved in mineral or oil exploration or in construction. Students attaining the Ph.D. degree are usually employed by universities or governmental and industrial research groups.

The Bachelor of Arts program in Earth and Environmental Science is intended to provide a broad 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. 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 B.S. degrees.

Undergraduate Study

Two of the majors offered in the Earth and Space Sciences Department are designated capstone majors: Geology and Geology/Engineering Geology. In both programs 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 B.A.

Preparation for the Major

Required: Earth and Space Sciences 1 or 1F or 1H, 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, 1C, 4AL, and 4BL, or 6A, 6B, and 6C; Civil and Environmental Engineering 15 or Program in Computing 10A or knowledge of Fortran or C++ demonstrated by examination. 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, two general chemistry courses with laboratory for majors, and one year of calculus. One introductory biology course with laboratory, one year of calculus-based physics with laboratory, and one introductory computer programming course are recommended.

Refer to the UCLA Transfer Admission Guide at http://www.admissions.ucla.edu/prospect/adm_tr.htm for up-to-date information regarding transfer selection for admission.

The Major

Required: Three courses from Earth and Space Sciences 111, 112, 116, 119; three additional upper division courses from Earth and Space Sciences other than 100; three courses from Geography 100 and 100A, 101 and 101A, 104, 105 and 105A, M107, M109, 110, 120, 121, 124, 125, M127, M131.

Geology B.S.

Capstone Major

Preparation for the Major

Required: Earth and Space Sciences 1 or 1F or 1H or 5 or 8 or 9 or 15, 51, 61; Chemistry and Biochemistry 20A, 20B, 20L; Mathematics 31A, 31B, 32A, 33A; Physics 1A, 1B, 1C, 4AL, 4BL; Civil and Environmental Engineering 15 or Pro-
gram in Computing 10A or knowledge of Fortran or C++ demonstrated by examination. Recommended: Mathematics 32B. Each course must be passed with a minimum grade of C–.

Transfer Students
Transfer applicants to the Geology/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. One introductory biology course with laboratory, one year of calculus-based physics with laboratory, and one introductory computer programming course are recommended.

Refer to the UCLA Transfer Admission Guide at http://www.admissions.ucla.edu/prospect/adm_tr.htm for up-to-date information regarding transfer selection for admission.

The Major
Required: Earth and Space Sciences 103A, 103B, 111, 112, 135, 139; Civil and Environmental Engineering 108, 120, 121, 150; one capstone field research course (Earth and Space Sciences 121); one course from Earth and Space Sciences C126, C132, 134, 136C, 137, C141, 150, Civil and Environmental Engineering 128L, 151, 155, Geography 100.

Geology/Paleobiology B.S.
Preparation for the Major
Required: Earth and Space Sciences 1 or 1F or 1H, 3, 16 or 17, 51, 61; Chemistry and Biochemistry 14A, 14B, 14BL, 14C, and 14CL, or 20A, 20B, 20L, 30A, and 30L; Life Sciences 2, 3, 4; Mathematics 3A, 3B, and 3C, or 31A, 31B, and 32A; Physics 1A, 1B, and 4AL, or 6A and 6B. Each course must be passed with a minimum grade of C–.

Transfer Students
To be admitted as Geology/Paleobiology majors, transfer students with 90 or more quarter units (60 semester units) must have completed one introductory Earth sciences course, one introductory biology course with laboratory, two general chemistry courses with laboratory for majors, and one year of calculus. One calculus-based physics course with laboratory, and one introductory computer programming course are recommended.

Refer to the UCLA Transfer Admission Guide at http://www.admissions.ucla.edu/prospect/adm_tr.htm for up-to-date information regarding transfer selection for admission.

The Major

Geophysics/Geophysics and Space Physics B.S.
Preparation for the Major
Required: Earth and Space Sciences 1 or 1F or 1H, 9; Chemistry and Biochemistry 20A, 20B, 20L; Mathematics 31A, 31B, 32A, 32B, 33A, 33B; Physics 1A, 1B, 1C, 4AL, 4BL, 17, 18L; Civil and Environmental Engineering 15 or Program in Computing 10A or knowledge of Fortran or C++ demonstrated by examination. Each course must be passed with a minimum grade of C–.

Transfer Students
Transfer applicants to the Geophysics/Geophysics and Space Physics major with 90 or more quarter units (60 semester units) must have completed one introductory Earth sciences course, one general chemistry course with laboratory for majors, and one year of calculus. A second year of calculus, one year of calculus-based physics with laboratory, and one introductory computer programming course are recommended.

Refer to the UCLA Transfer Admission Guide at http://www.admissions.ucla.edu/prospect/adm_tr.htm for up-to-date information regarding transfer selection for admission.

The Major
Required: Earth and Space Sciences 134, M140, 152, 153, 154, 155; Mathematics 105A, 105B, 110A, 110B, 112, 131; two upper division courses from the physical sciences, engineering, or mathematics (must be approved by the undergraduate adviser).

Students planning to do graduate work in specialized careers in Earth sciences should, when possible, take appropriate courses in departments outside the major in addition to those already specified. Suggested graduate programs for various fields of emphasis are available in the Student Affairs Office, 3683 Geology, and provide guidelines in selecting upper division courses.

Qualified undergraduate students may, with consent of their advisers and the instructor, take Earth and Space Sciences graduate courses numbered from 200A through 248.

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 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 an overall grade-point average of 2.0 or better.

Required Lower Division Courses (8 units):
Earth and Space Sciences 1, one course from 5, 13, 15, or 61.

Required Upper Division Courses (20 units minimum): Five courses from Earth and Space Sciences 101, 112, C113, 139, 150, 153.

A minimum of 20 upper division units applied toward the minor requirements must be in addition to units applied toward major or minor requirements in another department or program.

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.

Required Lower Division Courses (8 units): Earth and Space Sciences 1, 51.
Required Upper Division Courses (20 to 26 units): Two courses from Earth and Space Sciences C106, C107, C109, and three courses from 103A, 103B, 103C, C106 or C107 or C109 (whichever course was not applied above), 152, 153.

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, http://www.gdnet.ucla.edu/gasaa/library/pgmgrqintro.htm. 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 and Space Sciences offers Master of Science (M.S.), Candidate in Philosophy (C.Phil.), and Doctor of Philosophy (Ph.D.) degrees in Geochemistry, Master of Science (M.S.), Candidate in Philosophy (C.Phil.), and Doctor of Philosophy (Ph.D.) degrees in Geology, and Master of Science (M.S.) and Doctor of Philosophy (Ph.D.) degrees in Geophysics and Space Physics.

Earth and Space Sciences Lower Division Courses
1. Introduction to Earth Science. (4) Lecture, three hours; laboratory, two hours. Not open to students with credit for or currently enrolled in course 1F, 1H, or 100. Elements of Earth science; study of Earth materials; nature and interpretation of geologic evidence; study of geologic processes; historical aspects of geology. P/NP or letter grading.
1F. Earth Sciences with Fieldwork. (5) Lecture, three hours; laboratory, two hours; two field days. Not open to students with credit for or currently enrolled in course 1, 1H, or 100. Elements of Earth science; study of Earth materials; nature and interpretation of geologic evidence; study of geologic processes; historical aspects of geology. Introduction to field study of selected problems in geology and history. P/NP or letter grading.
1H. Fundamentals of Earth Science. (4) Lecture, three hours; laboratory, two hours; two field days. Not open to students with credit for or currently enrolled in course 1 or 100. Particularly recommended for future physical sciences majors with strong high school or some lower division preparation. Introduction to Earth materials, physical geology, and tectonics, with examples of geophysical and geochemical methods. 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, Earth, space science, paleontology, 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, four hours; one field day. Study of plasma physics. 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.
13. Natural Disasters. (5) Lecture, three hours; discussion, one hour; two field days. 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 combines with variety 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 discussion of how these natural events affect quality of human life. P/NP or letter grading.
15. Blue Planet: Introduction to Oceanography. (5) Lecture, three hours; laboratory, one hour. Not open for credit to students with credit for or currently enrolled in Ecology and Evolutionary Biology 25. General introduction to geophysical, physical, chemical, and biological processes and history of Earth’s global ocean system. P/NP or letter grading.
17. Dinosaurs and Their Relatives. (4) Lecture, three hours; laboratory, two hours; one optional field trip. Designed for nonmajors. Evolution of biology, ecology, and extinction of dinosaurs and close relatives, in context of history of biosphere. Information from paleontology, biology, and geology. P/NP or letter grading.
20. 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.
51. Mineralogy: Earth and Planetary Materials. (5) (Formerly numbered 51A, 51B.) Lecture, three hours; laboratory, four hours. Enforced requisite: course 1 or 1H. Recommended: completion of chemistry requirements. Principles of mineralogy. Mineral structure and bonding and crystal chemistry, with focus on materials of interest for Earth and planetary sciences and major rock-forming minerals. Laboratory study of relationship between mineral structure and properties, including...
hand sample identification, microscopy (optical and electronic), X-ray diffraction, and spectroscopy techniques. P/NP or letter grading.

61. Geologic Maps. (4) Lecture, two hours; laboratory, three hours; five field days. Enforced requisite: core course 1 or 1H. Planning, creation, and interpretation of geologic maps, including both practical and philosophical problems that arise. Topographic and geologic mapping in field. Interpretation of published maps in laboratory. 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 course 1 or 1H. Fundamentals of physical geography 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, one hour; two optional field trips. Preparation: one lower division atmospheric sciences, chemistry, Earth sciences, or physics course. Not open for credit to students with credit for course 101F. Earth's energy resources (fossil fuels and alternatives) from Earth science and sustainability perspective. P/NP or letter grading.

101F. Earth's Energy with Fieldwork. (5) Lecture, three hours; laboratory, two hours; two required field trips. Preparation: one division atmospheric sciences, chemistry, Earth sciences, or physics course. Not open for credit to students with credit for course 101. Earth's energy resources (fossil fuels and alternatives) from Earth science and sustainability perspective. P/NP or letter grading.

103A. Igneous Petrology. (6) Lecture, two to three hours; laboratory, six hours; field trips. Requisites: course 51, C103A, 114B, or 20B and 20L. Mathematics 3B or 31B. 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, crystallization, and chemical evolution. Petrologic structure of crust and mantle and its relation to seismology. Overview of petrology and chemical composition of Earth, moon, and other planets from their origin to present. P/NP or letter grading.

103B. Sedimentary Petrology. (6) Lecture, two to three hours; laboratory, six hours; field trips. Requisite: course 103A. Recommended: course 61. Study of sedimentary rocks based on characteristics of sedimentary particles and dynamics of depositional processes. Lecture, development of depositional facies models, and laboratories emphasize recognition of sedimentary deposits from each depositional facies. P/NP or letter grading.

103C. Metamorphic Petrology. (6) Lecture, two to three hours; laboratory, six hours; field trips. 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 mineral reactions, natural waters, and magmas; construction and interpretation of phase diagrams; case studies of important geochemical and environmental issues. Concurrently scheduled with course C206. P/NP or letter grading.


111. Stratigraphic and Field Geology. (6) Lecture, two hours; laboratory, three hours; fieldwork, one day per week. Principles of stratigraphy and geology: mapping, princi- ples of stratigraphy, structure, and geological interpretation. SIU or letter grading.

112. Structural Geology. (5) Lecture, three hours; laboratory, six hours. Recommended: course 1. Recommended: course 51. Planar and linear structures at different scales in sedimentary, metamorphic, and igne-rous rocks. Faults and folds, their description, classification, Deformation, strength, fracture, and rheological properties of rocks. P/NP or letter grading.

113. Biological and Environmental Geochemistry. (4) Lecture, one hour; laboratory, one hour; one computer lab. Designated for graduate students. Geologic mapping, prin- ciples of stratigraphy, structure, and geological map in-terpretation. SIU or letter grading.

111G. Field Geology. (2 to 4) Lecture, two hours; laborato-ry, three hours; fieldwork, one day per week. Requ-ired: geologic mapping of selected area; preparation of geologic report. P/NP or letter grading.

1111. Water Resources. (4) Lecture, two hours; laborato-ry, three hours; fieldwork, one day per week. Requ-ired: geologic mapping of selected area; preparation of geologic report. P/NP or letter grading.

1111. Water Resources. (4) Lecture, two hours; laborato-ry, three hours; fieldwork, one day per week. Requ-ired: geologic mapping of selected area; preparation of geologic report. P/NP or letter grading.

1111. Water Resources. (4) Lecture, two hours; laborato-ry, three hours; fieldwork, one day per week. Requ-ired: geologic mapping of selected area; preparation of geologic report. P/NP or letter grading.

1111. Water Resources. (4) Lecture, two hours; laborato-ry, three hours; fieldwork, one day per week. Requ-ired: geologic mapping of selected area; preparation of geologic report. P/NP or letter grading.
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. Requisites: courses 103B, 111. Mechanics of sedimentary basin development, flexural and thermal subsidence, isostasy, subsidence analysis, quantitative basin modeling, sediment provenance, tectonic setting. Concurrently scheduled with course C241. P/NP or letter grading.


152. Physics of Earth. (4) Lecture, three hours; discussion, one hour. Requisite: Mathematics 31A, 31B, 32A. Physics of Earth. Part of the element of Earth physics used to explore it. Isostasy, plate tectonics, mantle convection and geodynamics as discovered with tools of elasticity, fluid mechanics, and thermodynamics. P/NP or letter grading.

153. Oceans and Atmospheres. (4) Lecture. Three hours; discussion, one hour. Requisites: Mathematics 31A, 31B, 32A, Physics 1A, 1B, and 1C (or 1A, 1B, and 1C). Physics and chemistry of Earth’s oceans and atmosphere; origin and evolution of planetary atmospheres; biogeochemical cycles, atmospheric radiation and climate, energetics and dynamics of oceanic and atmospheric circulation systems. P/NP or letter grading.


C160. Field Seminar. (2 to 6) Seminar; three hours; discussion, one hour; fieldwork, five to 20 days. Requisite: 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 subspecialties as prescribed. May be repeated for credit. Concurrently scheduled with course C260. P/NP or letter grading.

C162. Application of Remote Sensing in Field. (3) Fieldwork, four hours; laboratory, one hour. Requisite: course 150. Application of remote-sensing techniques to field situations. Digital analysis and interpretation of near-infrared, thermal-infrared, and microwaves data from satellites and aircraft. Field observation of study site in California desert for testing hypotheses during week between Winter and Spring Quarters. Concurrently scheduled with course C262. P/NP or letter grading.

184G. Field Geology for Graduate Students. (2 to 4) Lecture, two hours; four to five field trips. Requisite: course 150. Lecture- and lab-based graduate student geology program. Advanced techniques in field geologic mapping, exposing students to igneous, metamorphic, and sedimentary terranes with varying amounts of tectonic setting. May be repeated for credit. S/U or letter grading.

C108. Special Topics in Earth and Space Sciences. (4) Lecture/laboratory, to be arranged. Departmentally sponsored. May be repeated for credit. S/U or letter grading.

193A-193B-193C. Undergraduate Journal Club Seminars: Earth and Space Sciences. (1-1-1) Seminar, one hour. Limited to undergraduate and graduate students. Study of current topics in Earth and space sciences, including participation in weekly department colloquium. May be repeated for credit. P/NP grading.

C194A-C194Z. Research Topics in Earth and Space Sciences. (1 each) Research group meeting, one to three hours. Designed for undergraduate Earth and space sciences students participating in research groups. Corequisite: laboratory course. Concurrently scheduled with courses C296A-C296Z. P/NP grading.

C194A. Rock Deformation, Structural Geology, Tectonics.
C194B. Volcanology and Geochemistry of Volcanic Rocks.
C194C. Seismology and Solid Earth Physics.
C194D. Thermal Evolution of Lithosphere.
C194E. Sedimentation and Tectonics.
C194F. Seismology.
C194G. Planetary and Orbital Dynamics.
C194H. Earthquakes.
C194J. Metamorphic Petrology.
C194K. Space Physics.
C194L. Magnetic Phenomena.
C194M. Planetary Physics.
C194N. Martian Surface and Atmosphere.
C194O. Tectonics and Stratigraphy.
C194P. Chemical Geochemistry.
C194Q. Paleobiology.
C194R. Planetary and Space Physics.
C194S. Precambrian Paleobiology.
C194T. Geophysical Fluid Dynamics.
C194U. Geomorphology and Geophysical Geology.
C194V. Cosmochemistry.
C194X. Earthquakes and Earth Structure.
C194Y. Space Plasma Physics.
C194Z. Structural Geology, Tectonics.

198. Honors Research in Earth and Space Sciences. (4) Two hours; limited to seniors. Individual research designed to broaden and deepen students’ knowledge of some phase of Earth 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 and Space Sciences. (2 to 4) Tutorial, two 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


204. Time-Series Analysis. (4) (Same as Statistics M221.) Lecture, three hours. Designed for graduate students. Exploration of methods for analyzing numerical time-series data. Basic topics in temporal and frequency analysis, followed by more recent topics. Examples in various fields including economics, signal processing, and atmospheric sciences. S/U or letter grading.


C207. Geochemistry. (4) Lecture, three hours; discussion, one hour. Designed for seniors and graduate physical sciences students. Origin and abundance of elements and their isotopes; distribution and chemistry of elements in Earth and environment. Concurrently scheduled with course C107. Additional homework and class presentation required of graduate students. S/U or letter grading.

208. Geothermics. (4) Lecture, two and one-half hours; discussion, one hour. Requisite: Mathematics 33A. Basic concepts of heat transfer applied to solutions of geological and geophysical problems, including continental heat flow, cooling of oceanic lithosphere, solidification of basaltic crust, and subsidence history of sedimentary basins, frictional heating on fault zones, mantle geochemistry, temperature in subducting slabs, thermal convection in geothermal systems. S/U or letter grading.

C209. Isotope Geochemistry. (4) Lecture, three hours; discussion, one hour. Designed for junior/senior and graduate physical and biological sciences students. Theoretical aspects of isotope behavior; stable and radiogenic isotopes. Principles of geochronology.
Use of isotopes as tracers in crust and mantle processes. Stable isotopes as indicators of environment and paleoclimate. Concurrently scheduled with course C109. Additional literature survey, that may result in class presentation, expected of graduate students. S/U or letter grading.


C213. Biological and Environmental Geochemistry. (4) Lecture, three hours. Requisites: Chemistry 14A and 14B or Biological Chemistry 105A. Introduction to synthesis of new and published research. Field area emphasis on interdisciplinary problems involving aspects of biology, human activity, and geology. Introduction to origin and composition of Earth, including atmosphere, crust, and hydrosphere. Examination of how these processes are influenced by biological cycles and feedbacks to biological evolution and diversity. Local and global-scale movements of biologically important elements like carbon, nitrogen, and phosphorus. Concurrently scheduled with course C113. S/U or letter grading.

M26. Evolutionary Biology. (4) (Same as Ecology and Evolutionary Biology M202A.) Lecture, two hours; discussion, discussion, two hours. Series of advanced topics in molecular evolution, with emphasis on evolutionary biology, including microevolution, specialization, and species concepts, analytical biogeography, adaptive radiation, mass extinction, community evolution, molecular clock, and the development of evolutionary thought. S/U or letter grading.

M27. Molecular Evolution. (4) (Same as Ecology and Evolutionary Biology M231.) Lecture, two hours, discussion, discussion. Series of advanced topics in molecular evolution, with special emphasis on molecular phylogenetics. Topics may include nature of genome, 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; lab, two hours. Introduction to satellite orbits, and orbital dissipation; planetary orbital system; resonance effects and chaos; spin-orbit and orbit-orbit coupling; planetary rings. S/U or letter grading.


22A. Physics and Chemistry of Planetary Interiors I. (4) Lecture, discussion, four hours. Students will gain an understanding of Earth and planets; high-pressure and temperature effects, phase transitions, and equations of state; variations of density and temperature with depth; thermal and seismic properties of chondritic material. S/U or letter grading. Concurrently scheduled with course C126. Graduate students required to read more advanced references, make class presentations, and be expected to result from that reading, and lead seminar-type discussions on their selected topics. S/U or letter grading.

22B. Introduction to Planetary Dynamics. (4) Lecture, three hours; laboratory/discussion, 90 minutes. Requisites: course 200B. Designed for graduate students. Understanding of ingenuity of igneous rocks based on geochemical, tectonophysical, and other geological evidence. Concurrently scheduled with course C126. Graduate students required to read more recommended references, make class presentations, and be expected to result from that reading, and lead seminar-type discussions on their selected topics. S/U or letter grading.

229. Planetary Atmospheres. (4) Lecture, three hours. Requisite: course 200B. Planetary atmospheric structure, dynamics, and composition. Topics include spacecraft observations; origin and evolutions of atmospheres; photochemistry, radiative mechanisms, and transport; atmospheric waves and general circulation; wave-mean flow and turbulence; remote sensing and inversion techniques. S/U or letter grading.

230. X-Ray Crystallography. (4) Lecture, three hours; laboratory, three hours. Requisite: course 51. Point, translation, and space group symmetry, diffraction of X-rays, crystal structures, diffraction methods, diffraction symmetry and elementary crystal structure analysis. S/U or letter grading.

231. Crystal Chemistry and Structure of Minerals. (4) Lecture, three hours. Requisite: course 51. Bonding, interatomic configurations, polymorphic transformations, isotopy, thermal and positional disorder; structures of some 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 (fractal crystallization, partial melting, hydrothermal solutions, element partitioning in coexisting phases). S/U or letter grading.

235A-235B-235C. Current Research in Geochemistry. (1-1-1) Discussion, one hour. Limited to graduate Earth and space sciences students. Seminars presented by staff, outside speakers, and graduate students concerning current research in Earth and planetary chemistry. 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. Applications to solar or planetary winds, steady-state magnetospheres, magnetospheric convection, restarturb processes, magnetic merging, field-aligned currents and magnetosphere/ionosphere 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 C141. Petrographic study of sandstones, with emphasis on provenance, petrofabrics, and paleoecologic reconstructions of modern and ancient sands. S/U or letter grading.


245A-245B-245C. Current Research in Tectonics. (1-1-1) Seminar, one hour. Limited to graduate Earth and space sciences students. Seminars presented by staff, outside speakers, and graduate students concerning current research in tectonics and/or sedimentology. May be repeated for credit. S/U 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) and their aspects as crystal structure, crystal chemistry, phase equilibria, and petrology. S/U or letter grading.

252. Seminar: Geochemistry. (4) Seminar, two hours; discussion, two hours. Phase equilibria under crustal conditions, chemistry of ocean waters, recent and ancient sediments, structure and chemistry of upper mantle, geochronology, cosmochemistry, and sedimentology. S/U or letter grading.

253. Seminar: Paleontology. (4) Seminar, three hours. Problems of igneous or metamorphic petrology: methods of evaluating physical conditions of metamorphism; diffusion in mineralogic systems; origin of ultra-mafic rocks and problems of mantle; element fractionation among coexisting phases; other current subjects in field. S/U or letter grading.

254. Seminar: Sedimentology. (4) Seminar, three hours. Processes of sediment transport and deposition; deep sea sediments; deltas and estuaries; petrology of carbonates, sandstones, and limestones; stratigraphy; paleoenvironmental studies. S/U or letter grading.

255. Seminar: Structural Geology and Tectonics. (4) Seminar, three hours. Flow and fracture in Earth's crust from microscopic to continental scale and in experiments. Examples may include metamorphic terranes, glaciers, plutons, volcanoes, and consolidated or unconsolidated sediments. Modern concepts of oceanic basins; processes leading to segregation of continental-type rocks. S/U or letter grading.

257. Seminar: Paleontology. (4) Seminar/discussion, three hours. Advanced topics in paleontology, biostratigraphy, paleoecology, and paleobiogeography with emphasis on relations to other disciplines. S/U or letter grading.

259. Seminar: Paleontocenics. (4) Seminar, two hours; discussion, two hours. Requisite: course C162. Basin evolution and paleogeography, with emphasis on Phanerozic of Western U.S. S/U or letter grading.

260. Field Seminar. (2 to 6) Seminar, three hours; discussion, one hour; fieldwork, five to 20 days. Requisite: 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 C160. S/U or letter grading.

261. Topics in Magnetospheric Plasma Physics. (4) Lectures, discussions, exercises on specific advanced topics in magnetospheric plasma physics. Previous courses examined magnetic storms, magnetospheric substorms, ultralow frequency waves, and auroral particle motion in Earth's radiation belts. S/U or letter grading.


266. Instrumentation, Data Processing, and Data Analysis in Space Sciences. (4) Lecture, three hours. Principles, testing, and operation of magnetometers and other instruments. Data processing, display, and archiving. Time-series analysis techniques, including filtering, Fourier transforms, principal-component analysis, and power spectra. S/U or letter grading.

M270A-M270B-M270C. Seminars: Climate Dynamics. (2 to 4 each) (Same as Atmospheric and Oceanic Sciences M270A-M270B-M270C and Geography M270A-M270B-M270C.) Seminar, two hours. Archaeological, geochemical, micropaleontological, and stratigraphic evidence for climate change throughout geologic past. Rheology and dynamics of climatic sub-systems: 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 scales. May be repeated for credit. S/U or letter grading.

275. Geocomplexity and Earthquake Predictions. (4) Lecture, two hours; discussion, two hours. Understanding and prediction of critical phenomena (defined as abrupt overall changes) in Earth's crust, mathematical modeling and analysis of data from seismology, remote sensing, and hydrology. Extensions to critical phenomena in engineering and socioeconomic systems. Letter grading.


282. Seminar: Geophysics. (4) Seminar, two hours; discussion, two hours. Seismology, geophysical prospection, electromagnetic prospecting. Selected topics in Earth physics. Content varies from year to year. 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 evidences from geochemistry, meteorites, and solar atmosphere; nucleosynthesis; 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 hour. Problems of current interest in fluid dynamics, with emphasis on geophysical applications. May be repeated for credit. S/U grading.


293A-293B-293C. Space Physics Journal Club. (1-1-1) Seminar, one hour. Limited to graduate space physics students. Space Sciences, Astrophysics and Oceanic Sciences, and Astrophysics and Space Sciences, Administration. Review of current space physics literature. May be repeated for credit. S/U grading.

295A-295B-295C. Current Research in Earth and Space Sciences. (1-1-1) Lecture, one hour. Limited to graduate Earth 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.

C296A-C296Z. Research Topics in Earth and Space Sciences. (1 each) Research group meeting, two to three hours. Designed for graduate Earth and space sciences students participating in research group. Advanced study and analysis of current topics in Earth and space sciences. Discussion of current research being done and presentation of lecture, three hours. Especially of faculty member teaching course. May be repeated for credit. Concurrently scheduled with courses C194A-C194Z. S/U grading.

C296A. Rock Deformation, Structural Geology, Tectonics.

C296B. Volcanology and Geochronology of Volcanic Rocks.

C296C. Seismology and Solar Earth Physics.

C296D. Thermal Evolution of Lithosphere.

C296E. Sedimentation and Tectonics.

C296F. Seismology.

C296G. Planetary and Orbital Dynamics.

C296H. Space Plasma Physics.

C296I. Earthquakes.

C296J. Metamorphic Petrology.

C296K. Space Physics.

C296L. Magnetic Phenomena.

C296M. Planetary Physics.

C296N. Martian Surface and Atmosphere.

C296O. Tectonics and Stratigraphy.

C296P. Chemical Geodynamics.

C296Q. Paleobiology.

C296R. Planetary and Space Physics.

C296S. Precambrian Paleobiology.

C296T. Geophysical Fluid Dynamics.

C296U. Geomorphology and Geological Physics.

C296V. Cosmochemistry.

C296X. Earthquakes and Earth Structure.

C296Z. Structural Geology, Tectonics.


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) of 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 employed 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.

499. Teaching Earth and Space Sciences. (2) Seminar, one hour; discussion, two hours. Classroom practice in teaching, with individual and group instruction on related educational methods, materials, and evaluation. Special emphasis on integration of technology in classroom. 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.

598. Directed Individual Study and/or Research. (2 to 12) Tutorial, to be arranged. May be repeated. S/U or letter grading.


EAST ASIAN STUDIES
Interdepartmental Program
College of Letters and Science

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C. Cindy Fan, Ph.D., Chair

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Cameron D. Campbell, Ph.D. (Sociology)
Jack W. Chen, Ph.D. (Asian Languages and Cultures)
Torquil Duthie, Ph.D. (Asian Languages and Cultures)
C. Cindy Fan, Ph.D. (Geography)
Andrea S. Goldman, Ph.D. (History)
Natasha L. Hellel, Ph.D. (Asian Languages and Cultures)
Burglind Jungmann, Ph.D. (Art History)
Hui-Shu Lee, Ph.D. (Art History)
Namhee Lee, Ph.D. (Asian Languages and Cultures)
William Marotti, Ph.D. (History)
Kyeyoung Park, Ph.D. (Anthropology, Asian American Studies)
David C. Schaberg, Ph.D. (Asian Languages and Cultures)
Shu-mei Shih, Ph.D. (Asian Languages and Cultures, Comparative Literature)
Richard E. Strassberg, Ph.D. (Asian Languages and Cultures)
Mariko Tamanoci, Ph.D. (Anthropology)
Michael F. Thies, Ph.D. (Political Science)
James Tong, Ph.D. (Political Science)

Scope and Objectives
East Asia is one of the most important and dynamic regions of the world today. With its ancient cultures, growing economies, technological progress, and increasing role in global affairs, the East Asian Studies major, an interdepartmental and interdisciplinary area studies program, is designed to provide students with comprehensive understanding of East Asia from historical and contemporary vantage points. Courses on China, Japan, and Korea allow majors to study regional phenomena from various national perspectives, while comparative or pan-East Asian coursework provides an in-depth knowledge of the region as a whole. Combining both social sciences and humanities approaches with language study, it is a highly flexible major that enables students to construct programs suited to a broad range of individual needs and career interests.

While students pursuing the East Asian Studies M.A. are normally expected to select one country (China, Japan, or Korea) as a focus of their work, the strength of the program is the access it provides to an understanding of regional and global ties that characterize East Asia today.

Undergraduate Study

East Asian Studies B.A.
Preparation for the Major

Required: (1) Two history and culture courses selected from Asian 61, 70A, 70B, 70C, General Education Clusters 25A, 25B, 25CW. The following courses also satisfy this requirement, but no more than one from each country may be selected: China — Chinese 50, 60, History 11A, 11B; Japan — Japanese 50, 70, History 9C; Korea — Korean 50, 60; (2) two social sciences courses, each from a different department, selected from Anthropology 9, Geography 3, 4, 6, Political Science 10, 20, 50, Sociology 1; (3) completion of the sixth term (intermediate level) of Chinese, Japanese, or Korean or demonstration by placement examination of proficiency through level 6.

To enter the major, students must have completed all nonlanguage preparation courses and the foreign language courses through at least level 3 (elementary level). Any remaining language courses may be completed while students are in major standing. Each preparation for the major course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. After satisfying the preparation requirements, students may declare the major in consultation with the academic counselor.

Transfer Students
Transfer applicants to the East Asian Studies 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, or Korean, two history and culture courses, and two lower division social sciences courses selected from two of the following fields: sociocultural anthropology, cultural or economic geography, comparative or world politics, or introductory sociology.

Transfer students with comprehensive understanding of East Asia from historical and contemporary vantage points. Courses on China, Japan, and Korea allow majors to study regional phenomena from various national perspectives, while comparative or pan-East Asian coursework provides an in-depth knowledge of the region as a whole. Combining both social sciences and humanities approaches with language study, it is a highly flexible major that enables students to construct programs suited to a broad range of individual needs and career interests.

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Refer to the UCLA Transfer Admission Guide at http://www.admissions.ucla.edu/prospect/adm_tr.htm for up-to-date information regarding transfer selection for admission.

The Major
Students must complete the following courses:

1. East Asian Studies 101
5. Five additional upper division courses in at least two separate departments on any East Asian country (China, Japan, Korea) and/or from the following list of transnational East Asian courses: Anthropology 175T, Asian 120, 151, 162, 163, 191A, Communication Studies 183, 184, Dance 110B, Ethnomusicology C150, Film and Television 188G (may be applied only as one 4-unit course), Linguistics M178, Philosophy 179, Sociology 179

East Asian Studies 191A and 191B may be applied toward specific upper division requirements for the major, depending on course topic.

One upper division course not on the above list from Asian American studies, South Asian studies, or Southeast Asian studies may be applied toward item 5.

Study in East Asia
East Asian Studies minors are highly encouraged to study abroad in East Asia. Students can travel to East Asia through a variety of programs with various lengths (summer or during the academic year). More information about travel abroad programs is available through the UCLA International Education Office, B300 Murphy Hall, (310) 825-4995, ieo@international.ucla.edu. See http://www.ieo.ucla.edu.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://www.gdnet.ucla.edu/gasai/library/pgmrqintro.htm. 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 (M.A.) degree in East Asian Studies.

East Asian Studies

Upper Division Courses

101. Introduction to East Asian Studies. (4) Lecture, three hours. Interdisciplinary course designed to introduce East Asia as regional unit from range of approaches and methodologies. Overview of historical and cultural constructs, flow of ideas and materials, society and state, geopolitics and international relations, and current challenges in and related to East Asia. P/NP or letter grading.

191A-191B. Variable Topics Research Seminars: East Asian Studies. (4-4) Seminar, three hours. Research seminars on selected topics in East Asian studies. Reading, discussion, and development of culminating project. May be repeated for credit with topic change. P/NP or letter grading.

ECOLOGY AND EVOLUTIONARY BIOLOGY
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Daniel T. Blumstein, Ph.D., Chair

Professors
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Arthur C. Gibson, Ph.D.
Malcolm S. Gordon, Ph.D.
Patricia A. Gowdy, Ph.D.
Gregory F. Grether, Ph.D.
Stephen P. Hubbell, Ph.D.
David K. Jacobs, Ph.D.
Glen M. Macdonald, Ph.D.
Peter M. Narins, Ph.D.
Peter N. Nonacs, Ph.D.
Philip W. Rundel, Ph.D.
Lawren Sack, Ph.D.
Barrett A. Schlinger, Ph.D.
Thomas B. Smith, Ph.D.
Victoria L. Sork, Ph.D.
Charles E. Taylor, Ph.D.
Blaire Van Valkenburgh, Ph.D.
Robert K. Wayne, Ph.D.
Cheryl Ann Zimmer, Ph.D.
Richard K. Zimmer, Ph.D.

Professors Emeriti
AA Barber, Ph.D.
Clifford F. Brunk, Ph.D.
Joseph Casparano, Ph.D.
Martin L. Cody, Ph.D.
Nicholas E. Collaris, Ph.D.
Eric B. Edney, Ph.D.

Franz Engelmann, Ph.D.
Elma Gonzalez, Ph.D.
William M. Hamner, Ph.D.
Henry A. Hespenheide, Ph.D.
J. Lee Kavanau, Ph.D.
Kenneth A. Nagy, Ph.D.
Park S. Nobel, Ph.D.
Richard W. Siegel, Ph.D.
Henry J. Thompson, Ph.D.
Richard R. Vance, Ph.D.
Peter R. Vaughn, Ph.D.
Edouard Zeiger, Ph.D.

Associate Professors
Michael E. Alfaro, Ph.D.
Paul H. Barber, Ph.D.

Assistant Professors
James O. Lloyd-Smith, Ph.D. (De Logi Professor of Biological Sciences)
John P. Novembre, Ph.D.
Van M. Savage, Ph.D.

Lecturer
Patricia M. Halpin, Ph.D.

Adjunct Professors
Carlos L. de la Rosa, Ph.D.
Jon E. Keeley, Ph.D.

Adjunct Associate Professor
Xiaoming Wang, Ph.D.

Adjunct Assistant Professors
Christy A. Brigham, Ph.D.
Ines Horovitz, Ph.D.
Seth D. Riley, Ph.D.
Raymond M. Sauvajot, Ph.D.
Debra M. Shier, Ph.D.
Ronald R. Swaisgood, Ph.D.

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 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 Arts and Ph.D. degrees provide opportunities for advanced, concentrated study. The Master of Arts degree requires, in addition to specified coursework, completion of either a comprehensive examination or the performance of original research culminating in a thesis. The Ph.D. 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.

Biological Sciences: Bachelor of Science

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 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

Required: Life Sciences 1, 2, 3, 4, 23L; Chemistry and Biochemistry 14A, 14B, 14BL, 14C, 14CL, and 14D, or 20A, 20B, 20L, 30A, 30AL, 30B, and 30BL; Mathematics 3A, 3B, and 3C, or 31A, 31B, and 32A; Physics 1A, 1B, 1C, 4AL, and 4BL, or 6A, 6B, and 6C; Statistics 13.

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, 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 at http://www.admissions.ucla.edu/prospect/adm_tr.htm 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, 121
3. At least 8 laboratory units (two courses) from Ecology and Evolutionary Biology 101, 103, 105, 109/109L (count as one course), 110, 111, 112, 113A, 114A, 115, 116, 117, C119, 120, 121, 122, 126, M127, 128, 129, 130, 133, 135, 136, 137, M139, 142, M145, 151A, 152, 154, 155, 160, 162, 170, M171, 175, 176 (counts as one-half course), 180A (counts as one-half course), 190B, 197, 198A and 198B, 199 (4 units), Molecular, Cell, and Developmental Biology 138, 165A (8 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)
4. At least 8 units (two courses) from Ecology and Evolutionary Biology 100, 101, 103, 105, 107, 109, 110, 111, 112, 113A, 114A, 115, 116, 117, C119, 120, 121, 122, 126, M127, 128, 129, 130, 133, 135, 136, 137, M139, 142, M145, 151A, 152, 154, 155, 160, 162, 170, M171, 175, 176 (counts as one-half course), 180A (counts as one-half course), 180B, 187, 198A and 198B, 199 (4 units), Molecular, Cell, and Developmental Biology 138, 165A (8 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)
5. At least 12 units (three courses) from the following: Anthropology 120 and/or one course from 124A, 124P, 127P, or 128A, Atmospheric and Oceanic Sciences M105 (or Ecology and Evolutionary Biology M139) or one course from 102, 103, 104, or 130, Biomathematics 110 and/or Bio-statistics 100B, chemistry (except Chemistry and Biochemistry 193A through 199; Chemistry and Biochemistry 153A and 153L are strongly recommended), Earth and Space Sciences 116, Ecology and Evolutionary Biology 187, 188, 198A and 198B, 199 (4 units), Environment 184, Geography 112 and/or one course from 108 or 111, Human Genetics C144 or one course from Life Sciences 100HA, 100HB, or 100HC, mathematics (except Mathematics 105A, 105B, 106, 191 through 199), microbiology, immunology, and molecular genetics (except Microbiology, Immunology, and Molecular Genetics 193A through 199), molecular, cell, and developmental biology (except Molecular, Cell, and Developmental Biology 190A through 199D), Neuroscience M101A, M101B, M101C, 102, M130, M148, physics (except Physics 190 through 199), physiological science (except Physiological Science 191 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.

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 B.S.

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

Life Sciences Core Curriculum

Required: Life Sciences 1, 2, 3, 4, 23L; Chemistry and Biochemistry 14A, 14B, 14BL, 14C, 14CL, and 14D, or 20A, 20B, 20L, 30A, 30AL, 30B, and 30BL; Mathematics 3A, 3B, and 3C, or 31A, 31B, and 32A (31A, 31B, and 32A must be taken to satisfy the calculus requirement); Physics 1A, 1B, 4AL, and 4BL, or 6A, 6B, and 6C; Statistics 13.

Each core curriculum course must be passed with a grade of B– or better, and major 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, 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 at http://www.admissions.ucla.edu/prospect/adm_tr.htm 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 103, 105, 110, or 130
2. At least 4 physiology units (one course) from Ecology and Evolutionary Biology 137, 162/162L (must take both), 170, or Physiological Science 166
3. At least 12 ecology, behavior, and evolution units (three courses) from Anthropology 128A, Ecology and Evolutionary Biology 100, 116, C119, 120, 121, 122, 126, 128, 129, 130, 133, 135, 136, 137, 142, 151A, 152, 154, 155, 162, 171, 175
4. One capstone field quarter consisting of 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 the following: Anthropology 128A, chemistry (except Chemistry and Biochemistry 193A through 199; Chemistry and Biochemistry 153A and 153L are strongly recommended), Earth and space sciences (geology only; except Earth and Space Sciences 188 through 199), ecology and evolutionary biology (except Ecology and Evolutionary Biology 190 through 196), Environment 184, geography (except Geography 188 through 199), mathematics (except Mathematics 105A, 105B, 106, 191 through 199), microbiology, immunology, and molecular genetics (except Microbiology, Immunology, and Molecular Genetics 193A through 199), physics (except Physics 190 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, who are graduating seniors, have taken a broad range of ecology, behavior, and evolution coursework, and have maintained a good grade-point average.

Each course applied toward requirements for preparation for the major and the major 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. Consult the Undergraduate Advising Office for all requirements for the Marine and Field Biology Quarters.

Marine Biology B.S.

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: Life Sciences 1, 2, 3, 4, 23L; Chemistry and Biochemistry 14A, 14B, 14BL, 14C, 14CL, and 14D, or 20A, 20B, 20L, 30A, 30AL, 30B, and 30BL; Mathematics 3A, 3B, and 3C, or 31A, 31B, and 32A; Physics 1A, 1B, 1C, 4AL, and 4BL; or 6A, 6B, and 6C; Earth and Space Sciences 15 or Atmospheric Sciences 1; Statistics 13.

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, 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 at http://www.admissions.ucla.edu/prospect/adm_tr.htm 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, 137, 142, 170 (unless taken under item 2), or Physiological Science 166
4. At least 4 ecology and behavior units (one course) from Anthropology 128A, Ecology and Evolutionary Biology 100, 116, C119, 122, 126, 128, 129, 133, 136, 137, 142, 151A, 152, 154, 155, 162, or 170
5. At least 4 evolution units (one course) from Ecology and Evolutionary Biology 116, 120, 121, 130, 133, 135, M171, or 175
6. One capstone field quarter consisting of 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, M105 (or Ecology and Evolutionary Biology M139), 130, Chemistry and Biochemistry 103, 153A, Earth and Space Sciences 100, 116, 119, C141, 153, Ecology and Evolutionary Biology 198B, 199, Environment 184, Geography 100, 101, 103, M106, 123, 130, 169, Mechanical and Aerospace Engineering 103, or 150A

Credit for 199 courses from other departments may not be applied.

Each course applied toward requirements for preparation for the major and the major 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. It is strongly recommended that students complete Ecology and Evolutionary Biology 109 and 109L prior to applying for the Marine Biology Quarter. Consult 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, 124, 125, 126, 132, and 134B. The Marine Biology Quarter includes some combination of Ecology and Evolutionary Biology 102, 104, 147, 148, 155, or 163. The Field and Marine Biology Quarters occur during Fall and Spring Quarters. To participate, students must enroll in all courses in the respective program. Participants in both programs are selected by personal interview during Fall or Winter Quarter. 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 ecosystems 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) file a petition in the Undergraduate Advising Office, 2235 Life Sciences. 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 Ecology and Evolutionary Biology / 279
some of the upper division courses accepted for the minor.

**Required Lower Division Course (5 units):** Life Sciences 1.

**Required Upper Division Courses (28 units minimum):** Ecology and Evolutionary Biology 100, 116 (or Environment 121), and four to six courses from 101, 103, 105, 109, 111, 112, 114A, 122, 129, 151A, 154, 176, 180A.

No more than two upper division required courses may be applied toward both this minor and a major or minor in another department or program, 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 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, http://www.gdnet.ucla.edu/gasaa/library/pgmqrintro.htm. 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 Arts (M.A.), Candidate in Philosophy (C.Phil.), and Doctor of Philosophy (Ph.D.) 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, consequenc-es, 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 course P/NP or letter grading.

13. **Evolution of Life.** (4) Lecture, three hours; discussion, one hour. Not open to life science majors. Limited to 100 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, physiolo-gy, phylogeny, population dynamics, behavior, and ecology. Emphasis on critical role of historical process- ses. P/NP or letter grading.

17. **Evolution for Everyone.** (5) Lecture, three hours; discussion, two hours. Exploration in detail of Darwinian natural selection, with emphasis on evidence and implication for modern problems people and societies face, including antibiotic resistance, insect resistance to pesticides, and coevolution of pollinators with crop plants. Nature of science in context of questions about ongoing real-time Darwinian processes. 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 Life Sciences 1. Introduction to natural history of Western North America, especially Southern California. Classification, distribution, and ecology of common plants and animals. P/NP or letter grading.

25. **Marine Biology.** (5) Lecture, three hours; discussion, two hours; field trips, two hours. Not open for credit to students with credit for Earth 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, with special emphasis on deserts of Western North America. P/NP or letter grading.

95. **Lower Division Internship in Biology.** (4) Tutorial/fieldwork, three hours per week per unit. Internship course for lower division students to be supervised by Center for Community Learning, fieldwork site, and faculty advisor. Consult Undergraduate Office for more information. May be repeated twice. Individual contract with supervising faculty member required. P/NP grading.

97. **Variable Topics in Ecology and Evolutionary Biology.** (1 to 4) Seminar, three to 12 hours. Current issues in research in ecology and evolutionary biology. Consult Schedule of Classes for topics and instructors. May be repeated for credit with consent of instructor. P/NP or letter grading.

97X. **PEERS Forum: Pathways in Science.** (1) Formerly numbered Chemistry M97X and Molecular, Cell, and Developmental Biology M97X.) Lecture, one hour. Limited to students in Program for Excellence in Education and Research in Sciences (PEERS). Weekly series of lectures and workshops to acquaint students with practice of science, opportunities available to participate in research as undergraduate students, and careers available to graduates with science degrees. May be repeated twice, but only 1 unit may be applied toward graduation. P/NP grading.

**Upper Division Courses**

100. **Introduction to Ecology and Behavior.** (4) Lecture, three hours; discussion, one hour. Requisite: Life Sciences 1. Not open for credit to students with credit for course 118, C119, 122 through 126, 129, 132 through 134B, 136, or 151B. Introduction to methods and topics in ecology and behavior. Growth and regulation of populations, organization of communities and ecosystems, biogeography, and behaviors animals use to find food, choose mates, and interact in social groups. Letter grading.

100L. **Introduction to Ecology and Behavior Laboratory.** (2) Laboratory, four hours. Enforced requisites: course 100 (may be taken concurrently), Life Sciences 1. Introduction to methods and laboratory techniques used to study them. Exploration of variety of concepts in marine science, ranging from oceanography to behavior, primary productivity, and marine biodiversity, with emphasis on experimental design and scientific writing. Letter grading.

110. **Vertebrate Morphology.** (6) Lecture, three hours; laboratory, five hours. Requisites: Life Sciences 1, 2, 3, 4. 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 one- to two-day field trips. Requisite: Life Sciences 1. Adaptations, behavior, and ecology of vertebrates. Letter grading.

112. **Ichthyology.** (6) Lecture, three hours; laboratory, six hours; field trips. Requisite: Life Sciences 1. Highly recommended: courses 110, 111. Biology of freshwater and marine fishes, with emphasis on their evolution, systematics, morphology, physiology, and ecology. Field trips to examine fishes of Southern California, tidepools, and coastal streams. Letter grading.

113A. **Herpetology.** (5) Lecture, three hours; laboratory, three hours; field trips, three and one half days per term. Requisite: Life Sciences 1. Recommended: course 100. Vertebrate zoology course restricted to bi-
ology of reptiles and amphibians of world, covering current systematic, ecology, behavior, morphology, and physiology of these animals. Letter grading.

113B. Field Herpetology. (8) Prerequisite: Life Sciences 1. Recommended: courses 100, 111. Two 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.

114A. Ornithology. (5) Lecture, three hours; laboratory/field trips, three hours. Prerequisite: Life Sciences 1. Recommended: course 100. Systematics, distribution, physiology, behavior, and ecology of birds. Letter grading.

114B. Field Ornithology. (8) Prerequisite: 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.

115. Mammalogy. (5) Lecture, three hours; laboratory, three hours. Prerequisite: Life Sciences 1. Topics in mammalian biology, including evolution, ecology, behavior, functional morphology, systematics, physiology, and biogeography. Letter grading.

116. Conservation Biology. (4) Lecture, three hours; discussion. Prerequisite: Life Sciences 1. Recommended: course 100. Not open for credit to students with credit for Environment 121. Study of ecological and evolutionary principles as they apply to preservation of genetic, species, and ecosystem diversity. Discussion sections focus on interactions of science, policy, and economics in conserving biodiversity. Oral and written student presentation on specific conservation issues. Letter grading.

117. Evolution of Vertebrates. (5) Lecture, three hours; laboratory, three hours. Prerequisite: course 110. Recommended: one general geology course. Fossil record of evolution of vertebrates, with emphasis on paleobiology and morphology of tetrapods. P/NP or letter grading.

118. Plant Adaptations. (8) Lecture, one hour; field trip, 10 hours. Prerequisite: 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 environment. Community, population, and ecophysiological levels of integration. Letter grading.

C119. Mathematical and Computational Modeling in Ecology. (4) Lecture, three hours; discussion, one hour. Prerequisites: course 100, Mathematics 3B or 31A. Recommended: course 122. Life Sciences 1. Mathematics 3C. Introduction to modeling dynamics of ecological systems, 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 techniques and principles applicable throughout life and physical sciences. Concurrently scheduled with course C219. P/NP or letter grading.

120. Evolution. (4) Lecture, three hours; discussion, two hours. Prerequisites: Life Sciences 1, 2, 3, 4, Mathematics 3A and 3B, or 31A. Designed for departmental majors, particularly environmental and population biology. Introduction to mechanics and processes of evolution, with emphasis on natural selection, population genetics, speculation, evolutionary rates, and patterns of adaptation. P/NP or letter grading.

121. Molecular Evolution. (4) Lecture, three hours; discussion, one hour. Prerequisites: Life Sciences 3, 4. Molecular biology, with emphasis on evolutionary aspects. DNA replication, RNA transcription, protein synthesis, gene expression, and molecular evolution. Letter grading.

122. Ecology. (4) Lecture, three hours; discussion, two hours. Prerequisites: course 100, Life Sciences 1, Mathematics 3B or 31A. Highly recommended: Mathematics 31B, 32A. Designed for departmental majors specializing in environmental and population biology. Introduction to population and community ecology, with emphasis on growth and distributions of populations, interactions between species, and structure, dynamics, and functions of communities and ecosystems. P/NP or letter grading.

123. Marine Ecology. (4 or 8) Lecture, five hours; laboratory, 15 hours. Recommended prerequisites: courses 100, 122. Offered either as 4-unit quarter-long course or as 8-unit Field Biology Quarter course. 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.

124. Field Ecology. (4 or 8) Lecture, two hours; laboratory. Required: 4-unit quarter-long course conducted during first two weeks of course. Letter grading.

125. Tropical Animal Communication. (4 or 6) Prerequisite: courses 114A, 122. Basic principles of genetics, as either an 4-unit quarter-long course or as 8-unit Field Biology Quarter course. Four-course unit has lecture, three hours; discussion, two hours. Animal communication behavior, including how animals use chemical signals to communicate, 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.

126. Behavioral Ecology. (4 or 8) Prerequisites: course 100, Life Sciences 1, Mathematics 3C or 32A. Recommended: course 122. Offered either as 4-unit quarter-long course or as 8-unit Field Biology Quarter course. Four-course unit has lecture, three hours; discussion, three hours. Animal communication behavior, island biogeography, and evolution of social behavior. Eight-unit course covers same basic lecture material in five intensive weeks, followed by extended field trip where students do individual projects in behavioral ecology. Letter grading.

M127. Soils and Environment. (4) (Same as Environmental Science M127 and Geography M127.) Lecture, three hours; discussion, one hour; field trips. General treatment of soils and environmental implications: soil development, weathering, transformation of soil orders; physical, chemical, hydrological, and biological properties; water use, erosion, and pollution; management of soils as related to plant growth and distribution. P/NP or letter grading.

128. Plant Physiological Ecology. (5) Lecture, three hours; laboratory, three hours; one-day field trip. Prerequisites: Life Sciences 1, Physics 1C and 4BLC, or 6C or 6CHC. Study of plant/environment interactions under natural conditions. Transpiration and photosynthesis, leaf temperatures, and water movement in soil/plant/atmosphere continuum. Letter grading.

129. Animal Behavior. (4) Lecture, three hours; discussion. Prerequisites: two hours of 100. Life Sciences 1. Introduction to behavioral ecology. Methods and results of evolutionary approaches to study of animal behavior, including foraging strategies, social competition, sexual selection, mating systems, cooperation, and social organization. Letter grading.


132. Field Behavioral Ecology. (8) Lecture, two hours; laboratory/field trip, 10 hours. Prerequisites: course 100, Life Sciences 1. Recommended: course 129. Five-week course offered only as part of Field Biology Quarter. Field research in behavioral ecology, emphasizing animal communication. Design and execution of individual and small group field projects during semester and during extended field trip. Letter grading.

133. Elements of Theoretical and Computational Biology. (4) Lecture, three hours; laboratory, two hours; discussion, one hour. Prerequisites: Life Sciences 1, 2, 3, 4, Mathematics 3A, 3B, and 3C, or 31A and 31B. Mathematical models for analyzing extended field trip. Letter grading.

134B. Field Physiological Ecology of Desert Animals. (8) Field course. Prerequisite: Life Sciences 1. Recommended: course 114A, 122. Two week off-campus research projects with two-week lecture course (four hours per day) and offered only as part of Field Biology Quarter. Consideration of physiological, behavioral, morphological, and ecological mechanisms desert animals use to enhance their survival in arid habitat. Students carry out supervised research projects, then write up and orally present their results in seminar fashion. Letter grading.

135. Population Genetics. (4) Lecture, three hours; discussion, one hour. Prerequisite: Life Sciences 4. Strongly recommended: course 100, Mathematics 31A, 31B, or Statistics 135. Basic principles of genetics as they apply to inference of evolutionary relationships among populations, dealing with genetic structure of natural populations and mechanisms and evolution of populations. Equilibrium conditions and forces altering gene frequencies, polygenic inheritance and molecular evolution, and methods of quantitativa.

136. Ecology, Behavior, and Evolution Laboratory. (6) Lecture, four hours; laboratory, eight hours; field trips, six and one half days per term. Prerequisites: course 100, Life Sciences 1, Mathematics 3C or 32A. Recommended: course 120 or 122 or 129. Designed for Ecology, Behavior, and Evolution majors. Laboratory and field exercises on population genetics, gene flow, regulation of gene frequency, behavioral interactions; species’ 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.

137. Chemical Communication. (4) Lecture, three hours; discussion, one hour. Prerequisites: Chemistry 11A, 11B, 14A, 14B, 14CL, 14C, 20A, 20B, 20L, 30A, 30AL, 30B, and 30BL. Life Sciences 1, 2, 3. Chemical signals are most important means by which organisms communicate. Exploration of how chemical signals are generated, modified, and detected; the function and behavior of microbes, plants, and animals. Synthetic approach, with emphasis on applications to cell biology, physiology, and ecology. P/NP or letter grading.

M139. Introduction to Marine Hydrography. (4) (Same as Atmospheric and Oceanic Sciences M105.) Lecture, three hours; discussion, one hour. Introductory 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 elements in atmosphere, ocean, and living organisms. Letter grading.


M145. Advanced Paleontology. (4) (Same as Earth and Space Sciences M118.) Lecture, three hours. Prerequisite: course 110 or 117 or Earth and Space Sciences 116. Consideration of major factors that have influenced history of life through an approach to analyzing patterns in fossil record, nature of rock re-
cord, and contribution of data from stable isopes, functional morphology, phylogenetics, and development 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. Lectures include physical-biological factors including abundance and distribution of organisms in marine environment. Laboratory includes experimental studies of local marine organisms, with emphasis on primary and secondary production and nutrient flux. Letter grading.

148. Biology of Marine Plants. (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. Introduction to general biology of marine algae, including basics of structure reproduction, life histories, systematics, and introdution types. Focus on processes across scales from cells to ecosystem to globe, instrumentation for environmental and ecophysiological measurements, and experiments used to make discoveries about plant adaptation. Letter grading.

151A. Tropical Ecology. (4) Lecture, one hour; discussion, five hours. Requisite: Life Sciences 1. Broad introduction to biodiversity, community structure, and dynamics and ecosystem function of range of tropical forest habitats, including such themes as biology, evolution, diversity, phylogeny, forest structure, plant growth forms, animal communities, herbivory, forest dynamics, and disturbance regimes. P/NP or letter grading.

151B. Field Tropical Ecology. (8) Lecture, five hours; fieldwork, 15 hours. Requisites: course 100. Life Sciences 1. Two weeks of off-campus research projects followed by two-week lecture course and offered only as part of Field Biology Quarter. Introduction to biodiversity, community structure, and dynamics and ecosystem function in tropical forest habitat. Letter grading.

152. World Vegetation Ecology and Ecophysiology. (4) Lecture, five hours; discussion, one hour. Enforced requisite: Life Sciences 1. Diversity of physiological and ecological adaptations in biomes of world, explaining distribution and dynamics of world vegetation types. Focus on processes across scales from cells to ecosystem to globe, instrumentation for environmental and ecophysiological measurements, and experiments used to make discoveries about plant adaptation. Letter grading.

153. Ecological Responses to Environmental Challenges. (4) Lecture, three hours; discussion, one hour. Requisites: Chemistry 14A, 14B, and 14BL (or 20A, 20B, and 20L), and 30AL, Life Sciences 1, 3. Highly recommended: course 111. Five-week intensive course offered only as part of Marine Biology Quarter. Intensive 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.

154. Field Biology of Marine Fishes. (4) Lecture, five hours; laboratory, 15 hours. Requisite: Life Sciences 1, 3. Recommended: Mathematics 3C or 32A, Physics 1C and 4BL, or 6C or 6CH. Five-week intensive course offered only as part of Marine Biology Quarter. Fieldwork. Natural history, ecology, and behavior of diverse assemblage of local marine fishes. Fieldwork strongly emphasized. Given off campus at marine science center. P/NP or letter grading.

155. Ecological Physiology of Marine Vertebrates. (4) Lecture, five hours; laboratory, 15 hours. Requisites: Chemistry 14B and 14BL, or 20B and 30AL. Life Sciences 1, 3. Recommended: Mathematics 3C or 32A, Physics 1C and 4BL, or 6C or 6CH. Five-week intensive course offered only as part of Marine Biology Quarter. Introduction 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. (6) Lecture, five hours; laboratory, five hours. Requisites: Chemistry 14D, or 30B and 30BL. Life Sciences 1, 2, 3, 4, Mathematics 3C or 32A, Physics 1C and 4BL, or 6C or 6CH. Not open for credit to students with credit for course 166. Designed for Ecology, Behavior, and Evolution majors. Introduction to physiology (function) of animal’s organs and organ systems, with emphasis on environmental interactions and ecological adaptations. Letter grading.


175. Evolutionary Dynamics of Sex. (4) Lecture, one hour; discussion, three hours. Enforced requisite: Life Sciences 1. Fitness 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 origins of sexual conflict, including Fisherian sex allocation, evolution of manipulation through deceptive communication, and the theory of human sexual conflict. Letter grading.


180A-180B. Seminars: Biology and Society. (2-4) (Formerly numbered 180.) Seminar, two hours (course 180A) and four hours (course 180B). Investigations and discussions of current socially important issues involving the natural biological sciences. Letter grade or pass/no pass as background for policy and as consequences of policy. May be repeated once for credit with instructor change. Letter grading.

181. Field Methods. (6) Lecture, three hours; laboratory, six hours. Requisites: Life Sciences 1, 3. Introduction to principles, biology, and evolution of infectious symbiosis, parasitism, emphasizing protozoa and invertebrate parasites, including those of man. Letter grading.


187. Variable Topics in Ecology and Evolutionary Biology. (4) Lecture, three hours; discussion, one hour. Requisites: Life Sciences 1, 2, 3. 4. Investigation, discussion, and study of current important issues involving substantial biological considerations in ecology and evolutionary biology. Contact Undergraduate Advising Office for current topics. 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. (1) Seminar, one hour. Designed to bring together students undertaking supervised tutorial research in seminar setting with three 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. Seminars on current issues in research in ecology and evolutionary biology. Consult Schedule of Classes for topics and instructors. Open only to graduate students with consent of instructor. P/NP grading.
Graduate Courses

M200A. Evolutionary Biology. (4) Same as Earth and Space Science 210A. Lecture, two hours; discussion, two hours. Corequisites: course from 198A through 198D or 199. Designed to encourage participation and discussion of major topics in field of behavioral ecology. Topics include introduction to variety of research pursuits in field and questions and debates at leading edges of research. S/U or letter grading.

M200B. Ecology. (4) Lecture, two hours; discussion, two hours. Survey of major topics in field of behavioral ecology. Topics include introduction to variety of research pursuits in field and questions and debates at leading edges of research. S/U or letter grading.

M200C. Animal Behavior. (4) Lecture, two hours; discussion, two hours. Survey of major topics in field of behavioral ecology. Topics include introduction to variety of research pursuits in field and questions and debates at leading edges of research. S/U or letter grading.

M204. Advanced Biology of Algae. (4) Lecture, four hours; discussion, one hour; laboratory, eight hours. Advanced study of topics in modern algal biology. Topics include discussion of appropriate aspects of chemical and physical oceanography and limnology; algal physiology; biochemistry, physiological ecology, and algal processes in ocean and freshwater habitats. S/U or letter grading.

M205. Marine Invertebrate Biology. (4) Lecture, four hours; laboratory, eight hours. Functional morphology, life histories, and systematics of marine invertebrates of major and most minor taxa; emphasis on two taxa and its habitat. Given off campus at marine science center. S/U or letter grading.

M206. Advanced Ichthyology. (4) Lecture, three hours; laboratory, three hours. Emphasis on recent approaches to study of vertebrate locomotor, feeding, and circulatory systems. Laboratory includes comparative and experimental analysis of morphological adaptation. Independent project required. S/U or letter grading.

M207. Advanced Vertebrate Morphology. (4) Lecture, three hours; laboratory, three hours. Emphasis on functional approach to evolution of vertebrate locomotor, feeding, and circulatory systems. Laboratory includes comparative and experimental analyses of morphological adaptation. Independent project required. S/U or letter grading.

M208. Behavior of Arthropods. (4) Lecture, three hours; discussion, one hour. Advanced study of topics in behavior of terrestrial arthropods, including communication, feeding, reproductive, and social behavior. Emphasis on both mechanistic and adaptive approaches toward understanding behavior. Independent project required. S/U or letter grading.

M209. Advanced Ornithology. (4) Lecture, two hours; laboratory, two hours; fieldwork, two hours. Emphasis on functional approach to evolution of vertebrate locomotor, feeding, and circulatory systems. Laboratory includes comparative and experimental analyses of morphological adaptation. Independent project required. S/U or letter grading.

M210. Advanced Ornithology. (4) Lecture, two hours; laboratory, two hours; fieldwork, two hours. Emphasis on functional approach to evolution of vertebrate locomotor, feeding, and circulatory systems. Laboratory includes comparative and experimental analyses of morphological adaptation. Independent project required. S/U or letter grading.


M214. Marine Ecology. (4) Lecture, four hours; discussion, one hour. Designed for graduate students. Structure, diversity, and energetics of marine communities; behavior, population dynamics, and biogeography of component species; associated oceanography and geology. Given off campus at marine science center. S/U or letter grading.


C219. Mathematical Ecology. (6) Lecture, three hours; discussion, one hour. Requisites: course 100, Mathematics 3B or 31A. Recommended: course 122, Life Sciences 170B. Introduction to modeling ecological systems, including formulation and analysis of mathematical models, basic techniques of scientific programming, probability and statistics, and basic methods from computational biology. Given off campus at marine science center. S/U or letter grading.


M225. Global Health Measures for Biological Emergencies. (4) Same as Epidemiology M226. Lecture, four hours. Requisite: Epidemiology 220. Mitigation of bioterrorism falls outside traditional public health protection 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.

M231. Molecular Evolution. (4) Same as Earth and Space Science 230. Lecture, two hours; discussion, two hours. Survey of major topics in field of molecular evolution, with special emphasis on molecular phylogenetics. Topics may include nature of genome, 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.

232. Advanced Ecology. (4) Lecture, three hours; discussion, one hour. Requisites: course 122. Concepts and topics in ecology, evolutionary or behavioral ecology, or theoretical ecology. 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 reproductive rates. May be repeated for credit. S/U or letter grading.

The graduate program is designed primarily for students pursuing the Ph.D. degree. The doctorate 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 B.A.**

**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), one 12-unit term in residence in regular session at UCLA, and all courses listed under Preparation for the Major. In addition, they must be enrolled in UCLA regular session at the time of application.

**Economics Premajor**

While students are completing the lower division preparation courses for the major, they may be classified as Economics premajors.

**Preparation for the Major**

Required: Economics 1, 2, 11, 41; one writing II course or English Composition 128B; Mathematics 31A, and 31B or 31E. Each course must be taken for a letter grade. A 2.0 (C) grade is required in each premajor 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 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 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 and 102.

**Major Fields**

- Economic theory (courses 101, 102, 106D, 106G, 107);
- Statistics, mathematical economics, and econometrics (courses 103, 141, 142, 143, 145);
- Economic development (courses 111, 112, 164);
- International economics (courses 121, 122);
- Public economics (courses 130, 131, M134, M135, M136);
- Regional economics (course 137);
- Labor economics (courses 150, 151);
- Money and banking (courses 106F, 106M, 106V, 160, 161);
- Government and industry (courses 106E, 106I, 106P, 170);

**Economics B.A./Applied Economics M.S. Dual Program**

An intercampus dual degree program between UCLA and UC Santa Cruz allows students to obtain a B.A. in Economics from UCLA and an M.S. in Applied Economics from UC Santa Cruz in five years. Consult the economics undergraduate counselor for additional information.

**Business Economics B.A.**

The Business Economics B.A. 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 perspective of economics. It is designed to prepare students for graduate education in business, economics, and law. The program requires students 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, students 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 enrolled in UCLA regular session at the time of application, (2) have a 2.0 (C) minimum grade in each preparation course, (3) have a minimum 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 major.
Economics/International Area Studies B.A.

The Undergraduate Council of the UCLA Academic Senate suspended admissions to the Economics/International Area Studies major effective Spring Quarter 2010. Continuing students who successfully complete the premajor courses by the end of Fall Quarter 2010 will be admitted to the major. Students currently in the major and transfer students admitted to the premajor for Fall Quarter 2010 are not affected by the admissions suspension.

The Economics/International Area Studies B.A. program is for students who wish to attain specialized knowledge of a particular geographical area in addition to the economics analysis provided by the major. It should be useful to those who plan careers in international business or government service. The department encourages participation in the University of California Education Abroad Program or other recognized international study programs. Experience in foreign firms or institutions would be an advantage but yields no academic unit credit toward the major.

Admission

Qualified students must apply for the major through the undergraduate counselors office in 2263 Bunche Hall. To apply, students must have completed at least 72 quarter units (but no more than 137 units), one 12-unit term in residence in regular session at UCLA, and all courses listed under Preparation for the Major (except for the second year of foreign language). In addition, they must be enrolled in UCLA regular session at the time of application. Each course must be completed for a letter grade. A minimum 2.0 (C) grade is required in each premajor course, with a combined 3.0 GPA in the economics and mathematics courses. Students must also have a 2.0 (C) grade-point average in their upper division courses taken for the major before applying. Language course preparation need not be completed at the time of admission but must be completed before preparing the research paper required in Economics 199B. The program as a whole must be approved by an Economics Department counselor before students are admitted to the major.

Economics/International Area Studies Premajor

While students are completing the preparation courses for the major, they may be classified as Economics/International Area Studies premajors. (Transfer students who wish to enter UCLA as Business Economics premajors must meet the admission screening requirements. For information, contact the Office of Undergraduate Admissions and Relations with Schools.)

Preparation for the Major

Required: Economics 1, 2, 11, 41, 101; one Writing II course; Management 1A, 1B; Mathematics 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 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 admission to UCLA: one microeconomics course, one macroeconomics course, two calculus courses from the mathematics/physical sciences sequence, 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 an undergraduate counselor before enrolling in any courses for the major.

Refer to the UCLA Transfer Admission Guide at http://www.admissions.ucla.edu/prospect/adm_tr.htm for up-to-date information regarding transfer selection for admission.

The Major

Required: Economics 102, 103, and at least two courses from the 106 series; three other upper division courses in economics in at least two different fields (former courses 100, 110, and 120 may not be included as electives); four upper division courses from Management 108, 120A, 120B, 122, 123, 124, 126, 127A, 127B, 130A, 130B, 140. 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 an undergraduate counselor before enrolling in any courses for the major.

To graduate, students must have a minimum 2.0 grade-point average in their upper division major courses, with at least a C– in each course. (Economics 101 applies on the preparation for the major, therefore requiring a minimum grade of C.)

Economics/International Area Studies B.A.

The Undergraduate Council of the UCLA Academic Senate suspended admissions to the Economics/International Area Studies major effective Spring Quarter 2010. Continuing students who successfully complete the premajor courses by the end of Fall Quarter 2010 will be admitted to the major. Students currently in the major and transfer students admitted to the premajor for Fall Quarter 2010 are not affected by the admissions suspension.

The Economics/International Area Studies B.A. program is for students who wish to attain specialized knowledge of a particular geographical area in addition to the economics analysis provided by the major. It should be useful to those who plan careers in international business or government service. The department encourages participation in the University of California Education Abroad Program or other recognized international study programs. Experience in foreign firms or institutions would be an advantage but yields no academic unit credit toward the major.

Admission

Qualified students must apply for the major through the undergraduate counselors office in 2263 Bunche Hall. To apply, students must have completed at least 72 quarter units (but no more than 137 units), one 12-unit term in residence in regular session at UCLA, and all courses listed under Preparation for the Major (except for the second year of foreign language). In addition, they must be enrolled in UCLA regular session at the time of application. Each course must be completed for a letter grade. A minimum 2.0 (C) grade is required in each premajor course, with a combined 3.0 GPA in the economics and mathematics courses. Students must also have a 2.0 (C) grade-point average in their upper division courses taken for the major before applying. Language course preparation need not be completed at the time of admission but must be completed before preparing the research paper required in Economics 199B. The program as a whole must be approved by an Economics Department counselor before students are admitted to the major.

Economics/International Area Studies Premajor

While students are completing the preparation courses for the major, they may be classified as Economics/International Area Studies premajors. (Transfer students who wish to enter UCLA as Business Economics premajors must meet the admission screening requirements. For information, contact the Office of Undergraduate Admissions and Relations with Schools.)

Preparation for the Major

Required: Economics 1, 2, 11, 41, 101, 102; Mathematics 31A, and 31B or 31E. Students also must complete at least the first year (or equivalent) of the two required years of a modern foreign language which is spoken in the geographical area of their major concentration.

Repetition of more than one preparation course or of any preparation course more than once results in automatic denial of admission to the major.

Transfer Students

Transfer applicants to the Economics/International Area Studies 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 year of a modern foreign language related to the geographical concentration.

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 an undergraduate counselor before enrolling in any courses for the major.

Refer to the UCLA Transfer Admission Guide at http://www.admissions.ucla.edu/prospect/adm_tr.htm for up-to-date information regarding transfer selection for admission.

The Major

Required: A total of 12 upper division courses selected from economics and the approved noneconomics courses listed below for the concentration. Eight economics courses are required, including Economics 103, 121, 122, 199B, and four economics courses from at least two different fields (selected from the major fields listed under the Economics major). Economics 101 and 102 (which are required for the premajor) cannot be used to satisfy this requirement; former courses 100, 110, and 120 may not be included as electives. The four remaining upper division courses are social sciences courses related to the concentration and must be selected from the approved courses listed below. Students are required to include selections from at least two different departments. Economics 199B must be completed in the last year before graduation and includes the preparation of a research paper on the economy of the country or region of the concentration. In addition, students must show two-year proficiency (or equivalent) in a modern foreign language related to their concentration. The noneconomics courses, the research paper, and the language learned must show consistency of purpose. Each major course must be taken for a letter grade.

One or two courses from Management 120A, 120B, 122, 127A, 130A, 130B may be substituted for one or two of the economics electives. To graduate, students must achieve a minimum 2.0 grade-point average for both economics and noneconomics courses, with a grade of C– or better in each course.

Major Concentrations

When students declare the major, they must also select a concentration that includes a geographical area where the foreign language they have taken is spoken. They must complete four of the approved noneconomics courses listed, including courses from at least two different departments. Students may not use courses that are not on their concentration list unless they have petitioned and received approval in advance. Consult an undergraduate counselor in 2263 Bunche Hall about the petition process.
East Asia
Languages: Chinese, Japanese, Korean

Europe
Languages: French, German, Italian, Portuguese, Spanish

Latin America
Languages: Portuguese, Spanish

Middle East
Languages: Arabic, Hebrew, Persian, Turkish
Approved Non-economics Courses: Geography 187, History 105C, 106B, Jewish Studies 142, Political Science 132A, 157, Turkic Languages 180

Former Soviet Union
Languages: Armenian, Russian

Individual Concentration
Language, geographical area, and non-economics courses to be approved in advance by the economics/international area studies faculty adviser

Mathematics/Economics B.S.
See the Mathematics/Economics listing for a description of the major.

Honors Program
The departmental honors program is open to majors in Economics, Business Economics, and Economics/International Area Studies 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 graduation, students must (1) select at least seven of the required upper division economics courses from the approved list designated for departmental honors, (2) complete a two-semester thesis acceptable to the departmental honors committee in Economics 198A and 198B, and (3) complete the major requirements at least a 3.5 grade-point average in the economics courses. Highest honors are awarded at the discretion of the departmental honors committee based on grade-point average and quality of the senior thesis.

Economics
Course 198A and 198B, the courses required for thesis preparation, may be counted as upper division courses toward the field in which the thesis is written (for purposes of satisfying the requirements for the major). Further information and application forms are available from an undergraduate counselor in 2263 Bunche Hall.

Computing Specialization
The specialization in Computing is not a major, but a supplement to the three departmental majors. It provides an extensive education in elementary computer science and an introduction to its applications in economics.

Majors in Economics, Economics/International Area Studies, and Business Economics 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, Program in Computing 10A, 10B, two courses from Program in Computing 10C, 15, 20A, 20B, 30, 40A, 60, and at least two courses from Economics 103, 106P, 141, 143, 151, 199A, 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 in the undergraduate counselors office, 2263 Bunche Hall, and are advised to do so after they complete Program in Computing 10B and are officially admitted to one of the above majors. 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, http://www.gdnet.ucla.edu/gasaa/library/pgmrqintro.htm. 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 (M.A.), Candidate in Philosophy (C.Phil.), and Doctor of Philosophy (Ph.D.) degrees in Economics.

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 resources; interest and capital. P/NP or letter grading.

2. 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 economic theory to practice of managing new businesses — combining elements of strategy, marketing, and entrepreneurial finance courses. Examination of both

3. Microeconomics Theory. (4) Lecture, three hours; discussion, one hour. Enforced requisites: courses 1, 2, one course from Mathematics 31B, 31BH, 31E, 32A. Laws of demand, supply, returns, and costs; price and output determination in different market situations. P/NP or letter grading.


Upper Division Courses
101. Microeconomics Theory. (4) Lecture, three hours; discussion, one hour. Requisite: course 11. Theory of factor pricing and income distribution; general equilibrium; implications of pricing process for optimal allocation of resources; interest and capital. P/NP or letter grading.


103. Introduction to Econometrics. (4) Lecture, three hours; discussion, one hour. Requisites: courses 11, 2, or Statistics 11 or 100A. Introduction to the theory and practice of econometrics, with goal to make students effective consumers and producers of empirical research in economics. Emphasis on intuitive understanding rather than rigorous arguments; concepts illustrated with applications in economics. P/NP or letter grading.

103L. Econometrics Laboratory. (1) Lecture, one hour; laboratory, one hour. Requisite: courses 11, and 41 or Statistics 11 or 100A. 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) Formerly numbered 188B.) Seminar, three hours. Enforced requisites: courses 11, 101, 102. Students, in groups of four, address three small problems and one large and more complex problem. Discussion of student-proposed solutions to problems in their groups, with small-group discussions to student presentations of results in class. Detailed coaching and feedback by M.B.A. students on student analysis and presentations. Final written and oral presentations required. P/NP or letter grading.

106D. Designed Markets. (4) Lecture, three hours; discussion, one hour. Requisite: courses 11, 101. Discussion of markets and other institutions that were purposefully designed, mostly by economists. Choices designers face when designing such markets. Markets and their context and corresponding economic models. Topics include matching between medical residents and hospitals, matching between high school students and New York and Boston high schools, kidney transplants, course allocation in business schools, eBay auctions, and prediction markets. Examination of how to optimize one’s actions and outcomes in such markets. P/NP or letter grading.

106E. Economics of Entrepreneurship. (4) Lecture, three hours. Requisite: course 101. Emphasis on entrepreneurial finance courses. Examination of both
strategic decisions of entrepreneurs (pricing, advertising, entering new markets) and more. Hands-on data collection and analysis is also a focus. P/NP or letter grading.

106F. Finance. (4) Lecture, three hours; discussion, one to two hours (when scheduled). Requisite: course 102. Enrollment priority to Business Economics majors. Introduction to the time value of money, financial decision-making, and applications to public policy. Letter grading.

106FL. Finance Laboratory. (1) Lecture, one hour; laboratory, one hour. Requisite: course 102. Corequisite: course 106F. Case-based analysis requiring students to apply theory from course 106F to real-world problems regarding topics such as discounted cash flow analysis, financial decision-making, and market trends. Hands-on data collection and problem solving and presentation of student analyses both orally and in writing. P/NP or letter grading.

106G. Introduction to Game Theory. (4) Lecture, three hours; discussion, one to two hours (when scheduled). Requisite: course 102. Enrollment priority to Business Economics majors. Introduction to the basic ideas of game theory and strategic thinking. Discussion of ideas through board games and Nash equilibrium, commitment, credibility, asymmetric information, and signaling, with application to examples from economics, business, and other real-life situations. Letter grading.


106N. Quantitative Methods in Economics. (4) Lecture, one hour; seminar, one hour. Requisites: courses 11, 101, 102. Application of analytical tools of economics to financial and real-world problems in financial markets. Study of the role of innovation in historical American enterprise. Examination of specific episodes of salient entrepreneurial innovation, as well as general theoretical and empirical treatments. Letter grading.


106T. Economics of Technology and E-Commerce. (4) Lecture, three hours. Requisites: courses 11, 101. 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 of student analysis. Letter grading.

106TL. Economics of Technology and E-Commerce Laboratory. (1) Lecture, one hour; laboratory, one hour. Requisites: courses 11, 101. Corequisite: course 106T. Case-based analysis requiring students to apply theory from course 106T to real-world problems regarding issues such as bidding in online auctions, two-sided markets, matching markets, reputation mechanisms, and more. Hands-on data collection and analysis is also a focus. P/NP or letter grading.

106V. Investments. (4) Lecture, three hours. Requisite: course 102. Recommended: course 106V. Enrollment priority to Business Economics majors. Introduction to decision-making and portfolio theory. Topics include optimal portfolio construction, fixed income analysis, option pricing theory, and active portfolio management. P/NP or letter grading.

106VL. Investment Laboratory. (1) Lecture, one hour; laboratory, one hour. Requisite: course 106V. Recommended: course 106V. Case-based analysis requiring students to apply theory from course 106V to real-world problems regarding issues such as portfolio management, option pricing, and other investment topics. Hands-on data collection and problem solving and presentation of student analyses both orally and in writing. P/NP or letter grading.


111. 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 facing economies today and to evaluate policies that are likely to be effective in improving the well-being of poor on globe. P/NP or letter grading.


122. International Finance. (4) Lecture, three hours; discussion, one hour. Requisite: course 102. Not open to students with credit for former course 120. Emphasis on interpretation of balance of payments and adjustment to national and international equilibria through changes in price levels, exchange rates, and national income. Other topics include making international payments, adjustment of exchange rates under various monetary standards, capital movements, exchange controls, and international monetary organization. P/NP or letter grading.


130L. Public Economics Laboratory. (1) Lecture, one hour; laboratory, one hour. Requisites: courses 11, 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.

131. Economics of Health and Healthcare. (4) Lecture, three hours. Requisites: courses 11, 101, 103. Economic analysis of health and healthcare. Presentation of several detailed economic models, including models of addiction, demand for healthcare, demand for insurance, nonprofit behavior, and other models. Evaluation of quantitative information from course readings and development of better understanding of econometric concepts and results. P/NP or letter grading.

132. Topics in Taxation and Social Insurance. (4) Lecture, three hours; discussion, one hour. Requisites: courses 11, 101. In-depth examination of selected topics related to current policy debates. Topics vary from year to year but typically cover such issues as tax policy and social insurance. Topics may include optimal taxation; tax inefficiencies and their implications for labor supply, savings, and investment; income redistribution and personal income taxation; tax and expenditures for firms’ investment and financing decisions; Social Security and SSDI reforms; and welfare programs. P/NP or letter grading.

M134. Environmental Economics. (4) (Formerly numbered M134A.) (Same as Environment 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 emphasis on designing incentives to protect environment. Highlights important role of using empirical data to test hypotheses about pollution’s causes and consequenc-es. P/NP or letter grading.

M135. Economic Models of Public Choice. (4) (Same as Political Science M105.) Lecture, three or four hours; discussion, one hour (when scheduled). Preparation: any lower division political science course. Enforced requisite: course 11. Designed for juniors/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.


137. Introduction to Urban and Regional Economics. (4) Lecture, three hours. Requisite: course 11. Survey of broad range of policy and theoretical issues that are addressed when trying to allocate tax policy in an urban setting. Topics include urbanization and urban growth, housing markets, location decisions of households and firms, transportation, urban land markets, and local public sector. P/NP or letter grading.

140. Inequality: Mathematical and Econometric Approach. (4) (Formerly numbered 145A.) Lecture, three hours. Requisites: courses 101, 103, and Mathe-matics 115A or 115A. In past decades, economists have learned remarkable amount about how society works. Increased understanding through application of distinctively economic methods of research — explicit mathematical models and techniques — to topics like healthcare, crime, education, and immigration, leading to increased understanding of inequality, how to measure it, how inequality has in creased in U.S., how America compares with other rich countries, and what causes inequality. Study of this
work, with focus on two important influences on in- 

equality — education and health. P/NP or letter grad-

141. Topics in Microeconomics: Mathematical Fi-

nance. (5) (Formerly numbered 141A.) Lecture, three hours; computer laboratory, one hour. Requisites: course 11, Mathematics 32A, either Statistics 100A or Mathematics 109. A model of financial markets and competitive equilibrium with time and uncertainty, one period security market model, market completeness. P/NP or letter grading.

142. Topics in Microeconomics: Probabilistic Mi-

croeconomics. (4) Lecture, three hours. Requisite: course 101. Combination of basic probability intro-

duced in Statistics 11 with microeconomic models pre-

sented in course 101 in order to explain phenomena such as insurance, job search, and stock mar-

ket behavior. Optimal production and consumption under uncertainty. Review of probability and introduc-

tion 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. Heteroske-

dasticity, limited dependent variable, panel data, time-

series. P/NP or letter grading.

145. Topics in Microeconomics: Mathematical Eco-

nomics. (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 11, 101, 102. Limited to seniors. Overview of most current developments in asset pricing theory for advanced un-

dergraduate 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 critiqued by visiting experts, UCLA faculty members, and advanced graduate students. Concurrently scheduled with courses C296A-C296B-C296C. P/NP or letter grading.

150. Labor Economics. (4) Lecture, three hours. Requisites: courses 11, 101, 102. Limited to seniors. Overview of most cur-

rent 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 critiqued by visiting experts, UCLA faculty mem-

bers, and advanced graduate students. Concurrently scheduled with courses C296A-C296B-C296C. P/NP or letter grading.

151. Topics in Labor Economics. (4) Lecture, three hours. Requisites: courses 101, 150. Selected topics in labor theory; income distribution; business cycles and unemployment in human capital and life cycles; migration; human fertility; marriage and di-

orce, etc. P/NP or letter grading.

C156A-C156B-C156C. Seminars: Labor Econom-

ics. (4-4-4) Seminar, three hours. Requisites: courses 11, 101, 102. Limited to seniors. Overview of most cur-

rent 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 critiqued by visiting experts, UCLA faculty mem-

bers, and advanced graduate students. Concurrently scheduled with courses C296A-C296B-C296C. P/NP or letter grading.

160. Money and Banking. (4) Lecture, three hours. Requisite: course 102. Principles of money and bank-

ing in a legal and institutional framework; money supply process; instruments, effects, and practice of monetary policy. P/NP or letter grading.

161. Monetary Theory. (4) Lecture, three hours. Requ-

itive: course 11. Review of theory of money and money-

etary exchange; level and term structure of interest rates; level and growth rate of money; transmission of monetary shocks; theory and practice of monetary pol-

icy. P/NP or letter grading.


164L. Advanced Topics in Macroeconomics: Theo-

ry of Economic Growth Laboratory. (1) Lecture, one hour; laboratory, one hour. Requisite: course 102. Course 164. Case-based analysis requir-

ing students to apply theory from course 164 to real-

world macroeconomic growth problems. Hands-on data collection and problem solving and presentation of student analyses in writing. P/NP or letter grading.

C166A-C166B-C166C. Seminars: Monetary Eco-

nomics/Macroeconomics. (4-4-4) Seminar, three hours. Requisite: course 102. Limited to seniors. Over-

view of most current developments in monetary eco-

nomics and macroeconomics for advanced undergrad-

uate and graduate students. Introduction to graduate-

level research in this field. Different topic each week, with presentation and discussion of new papers. Re-

search in progress presented, discussed, and criti-

zed by visiting experts, UCLA faculty members, and advanced graduate students. Concurrently scheduled with courses C246A-C246B-C246C. P/NP or letter grading.


(4) Lecture, three hours. Requisite: course 101. Not open for credit to students with credit for former course 170 or 171. Monopoly, collusion and competition, stra-

tegic firm behavior, nonprice competition with and with-

out entry, pricing practices, antitrust. Comparison of economies and consequences of competitive process. Monopoly competition, and collusion as economic theo-

ry, as antitrust doctrine, and as fact. Source of mo-

nopoly. Predatory behavior. Misleading practices in theory and policy. General problem of relationships be-

tween private rights of action and competitive entry. P/ NP or letter grading.

C176A-C176B-C176C. Seminars: Industrial Organi-

zation. (4-4-4) Seminar, three hours. Requisites: courses 11, 101. Limited to seniors. Review of most current developments in industrial organization for advanced undergraduate and graduate students. Introduction to graduate-level research in this field. Dif-

ferent topic each week, with presentation and discus-

sion of new papers. Research in progress presented, discussed, and critiqued by visiting experts, UCLA fac-

ulty members, and advanced graduate students. Concur-

tently scheduled with courses C276A-C276B-C276C. P/NP or letter grading.

181A. Development of Economic Institutions in West-

ern Europe. (4) Lecture, three hours. Requisite-

course 11. European economic history, 1700 to 1914. Custom, command, and market modes of organiza-

tion. Evolution of property rights, contract forms, and monetary arrangements. Decline of feudal institu-

tions, especially serfdom. Open field village and enclosures. Evolution of property rights, contract forms, and 

money. Slavery. Industrialization. Capital for-

mation. California development and relate them to current real-world issues. Hands-on data collection and prob-

lem solving and presentation of student analyses in writing. P/NP or letter grading.

C186A-C186B-C186C. Seminars: Economic History. (4-4-4) Seminar, three hours. Limited to seniors. Overview of most current developments in economic history for advanced undergraduate and graduate stu-

dents. Introduction to graduate-level research in this field. Different topic each week, with presentation and discussion of new papers. Research in progress pre-

sent, discussed, and critiqued by visiting experts, UCLA faculty members, and advanced graduate stu-

dents. Concurrently scheduled with courses C246A-

C246B-C246C. P/NP or letter grading.

187. Upper Division Research Seminar: Applica-

tions to Economic Theory. (4) Seminar, three hours. Requisites: courses 11, 101. Limited enrollment semi-

nars in which students usually write research paper on topic selected in consultation with instructor. P/NP or letter grading.

188. Career Development. (1) Lecture, one hour. En-

rollment priority to departmental majors. Designed to provide Business Economics majors with key knowl-

dge and practical skills used in real world that compli-

ment traditional academics to maximize interview, communication, and presentation skills and strengthen resume building. Coverage of career paths in business and other career fields. P/NP 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 econometrics. Topics include linear algebra, real numbers, and matrices, calculus of many variables, and multivariate calculus, and dynamics and dynamic optimization. S/U grading.

202A-202B. Methods in Economics I, II. (4 each) Lecture, three hours; laboratory, two hours. Should be taken prior to or concurrently with course 201B. Linear algebra and its applications to linear difference equations. Basic real analysis, normed vector space, Banach space, Hahn-Banach theorem, Schauder fixed point theorem, and theory of correspondences. S/U grading.

201A-201B-201C. Microeconomics. (4-4-4) Lecture, three hours. S/U or letter grading.


204A-204D. Applications of Economic Theory. (4 each) Lecture, three hours. S/U or letter grading.

204AB-204AB. California Population Research (Topical Seminar). (4-4, 3-3) Lecture, three hours. Examination of issues such as demography, health, aging, labor, and broad array of topics concerned with effects of economic, social, and political transformations on human behavior both in U.S. and abroad. Each course may be taken independently for credit. S/U grading.

M204L-M204M-M204N. Seminars: Pharmaceutical Economics and Policy. (1-1-3) Seminar, three hours every other week for three terms. Requisites: courses 201A, 201B, 201C, Health Services 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 (M204L, M204M) and S/U or letter (M204N) grading.

204R. (4) Lecture, three hours. Preparation: completion of first-year microeconomics and graduate econometrics courses. In past decade economists have learned remarkable amount about how society works. Increased understanding has come about through application of distinctively economic methods of research — explicit mathematical models and eclectical statistical techniques — to topics such as healthcare, crime, education, and immigration. Taken together this work has led to increased understanding of inequality, how to measure it, how inequality has increased in U.S., how America has been priced. LEVEL OF COMPLEXITY IMPORTANT, what causes inequality. Study of this work, with focus on two important influences on inequality — education and health — which are two areas in which knowledge is accumulating most rapidly. S/U grading.

205. Economic Modeling. (4) Lecture, three hours. Development of modeling skills by considering sequence of economic issues (e.g., peak load pricing, regulation, monopoly, capital asset pricing, Pareto efficiency). Emphasis on multivariate constrained optimization. S/U or letter grading.

207. History of Economic Thought. (4) Lecture, three hours. Topics from classical economics, including work of Smith, Ricardo, and Mill, and developments given every year. May be repeated for credit. S/U or letter grading.


Economic Theory

211A-211B. Economics of Uncertainty, Information, and Games. (4-4) Lecture, three hours. Preparation: introductory probability. Requisites: 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-212Z. Games in Advanced Theory. (4 each) Lecture, three hours. Current research in microeconomic theory. Content varies. Courses in this sequence not ordinarily given every year. May be repeated for credit. S/U or letter grading.


213B. Applied Game Theory. (4) Lecture, three hours. Preparation: calculus, introductory probability. Use of theory of Bayesian games to study bargaining, mone tary theory, and oligopoly. Use of theory of mechanisms to study auction design and imperfectly competitive markets. May be repeated for credit. S/U or letter grading.

214A-215A. Topics in Microeconomics. (4 each) Lecture, three hours. Requisites: course 213B. Current research in mathematical economics. Content varies. Ordinarily only two courses in this sequence given every year. May be repeated for credit. S/U or letter grading.

214A. General Equilibrium Theory. (4) Lecture, three hours. Requisites: course 201C. Core convergence theorem, cooperative and noncooperative approach to competitive equilibrium theory, perfectly competitive equilibria, no-surplus condition, and applications to mechanism theory and incomplete market models. May be repeated for credit. S/U or letter grading.


214A-215B-215C. Workshops: Economic Theory and Mathematical Economics. (4-4-4) Lecture, three hours. Workshops for pre- and co- dissertation writers. Discussion of advanced topics and recent developments in game theory, information and uncertainty, and general equilibrium theory. Presentation of recent papers published and unpublished in economic theory as well as research of instructor and students. In-class presentation expected. S/U grading.


Monetary Economics

221A-221D. Monetary Economics I to IV. (4 each) Lecture, three hours. S/U or letter grading.


221D. Monetary Economics IV. (4) Lecture, three hours. Requisites: courses 202A, 202B, 202C. Emphasis on applied macroeconomics, with topic change each year. Students select one particular data set to study. Each week class studies article from recent work in applied macroeconomics or applied econometrics that teaches one technique or suggests one theoretical restriction on data. Subgroups of students report back to class on technical approach on their selected data set. S/U or letter grading.

222B-222Z. 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 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 C166A-C166B-C166C. S/U (C226B) and S/U or letter (C226A, C226C) grading.

228A-228B-228C. Proseminars: Monetary Econom-ics. (4-4-4) Seminar, three hours. Workshops for predissertation and dissertation writers. Research in progress presented, discussed, and criti-zied by visiting experts. UCLA faculty members, advanced graduate students. Research paper required. S/U or letter grading.

228A-229B-229C. Workshops: Monetary Econom-ics. (4-4-4) Lecture, three hours. Workshops for predissertation and dissertation writers. Research in progress discussed by graduate students, UCLA faculty mem-
ers, and advanced graduate students. Overview of most current developments in labor economics for advanced graduate students. 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


C246A-C246B-C246C. Seminars: Economic History. (4-4-4) Seminar, three hours. Designed for predissertation and dissertation writers. Overview of most current developments in economic history in 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 or letter grading.


249A-249B-249C. Von Gremp Workshops: History of Entrepreneurship in U.S. Economy. (4-4-4) Lecture, three hours. Designed for graduate students. Workshops for advanced graduate students. Research in progress discussed by visiting experts, UCLA faculty members, graduate students. S/U or letter grading.

Econometrics


M232A. Bayesian Econometrics. (4) Same as Political Science M203E) 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.

239A-239B-239C. Workshops: Econometrics. (4-4-4) Lecture, three hours. Workshops for predissertation and dissertation writers. Research in progress presented, discussed, and criticized by visiting experts, UCLA faculty members, advanced graduate students. Research paper required. S/U grading.


249A-249B-249C. Workshops: Public Sector Microeconomics. (4-4-4) Lecture, three hours. Prerequisites: courses 109A, 109B, 109C. Workshops for predissertation and dissertation writers. Research in progress discussed by graduate students, UCLA faculty members, visiting experts. S/U grading.

Labor Economics

261A. Labor Economics I. (4) Lecture, three hours. Wages and determinants of competitive labor markets. Extensions of wage determination to schooling and occupational choice, life-cycle earnings profiles, discrimina-


276A-276B-276C. Prosemns: Labor and Popula-
tion Programs. (4-4-4) Seminar, three hours. Designed for predissertation and dissertation writers. Research in progress presented, discussed, and criti-
ized by visiting experts, UCLA faculty members, advanced graduate students. Concurrently scheduled with courses C156A-C156B-C156C. S/U (C266B) and S/U or letter (C266A, C266C) grading.

C266A-C266B-C266C. Seminars: Labor Econom-ics. (4-4-4) Seminar, three hours. Designed for predissertation 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, and advanced graduate students. Concurrently scheduled with courses C186A-C186B-C186C. S/U or letter grading.

269A-269B-269C. Workshops: Labor Economics. (4-4-4) Lecture, three hours. Workshops for predissertation and dissertation writers. Research in progress presented, discussed, and criti-
ized by visiting experts, UCLA faculty members, advanced graduate students. Research paper required. S/U grading.

284A-284B-284C. Workshops: Dynamic Econometrics. (4-4-4) Seminar, three hours. Emphasis on the development of research in econometrics of dynamic models. S/U or letter grading.
Industrial Organization

271A-271B. Industrial Organization, Price Policies, and Regulation I, II (4-4-4) Lecture, three hours. S/U or letter grading.

271A. Industrial Organization, Price Policies, and Regulation I. Lecture, three hours. Required. 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.


272A-272Z. Topics in Industrial Organization, (4 each) Lecture, three hours. Current research in industrial organization. Content varies. May be repeated for credit. 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 utility and public enterprises by way of contrast. S/U or letter grading.

C275A-C276B-C276C. Seminars: Industrial Organiza-
tion, (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 papers. Research in progress presented, discussed, and critiqued by visiting experts, UCLA faculty members, and advanced graduate students. Concurrently scheduled with courses C125A-C126B-C126C. S/U or letter grading.

Development Economics


286B. Cost-Benefit Analysis of Development Proj-
ects. (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 versus private evaluation criteria; applications to highway, electricity, and irrigation projects. S/U or letter grading.

287A-287Z. Topics in Development Economics, (4 each) Lecture, three hours. Current research in development economics. Content varies. Courses in this sequence not ordinarily given every year. May be repeated for credit. S/U or letter grading.

287A. Economic Problems of Latin America. (4) Lec-
ture, three hours. Economic history of Latin America. Great depression, import substitution and industrializa-
tion, inflation and growth, free market experiments, and economic integration. May be repeated for credit. S/U or letter grading.

287B. Economic Development in East Asia. (4) Lec-
ture, three hours. Recent economic history of East Asia, focusing on postwar development of Japan, Ko-
tea, and China. Emphasis on international in-
vestment and trade, especially with U.S., in area's eco-
nomical development. May be repeated for credit. S/U or letter grading.

287C. Economic Development 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.

288A-288B-288C. Proseminars: International and De-
volutionary Economics, (4-4-4) Seminar, three hours. Quarterly seminars for predissertation and dis-
sertation writers on current issues in international trade and finance and development economics. Pre-
sentation of work-in-progress for feedback from faculty and other graduate students. Presentation or research paper required. S/U grading.

291A. General Equilibrium and Finance. (4) Lec-
ture, three hours. Designed for graduate students. In-
troduction to mathematical finance from general equi-

291B. Fundamentals and Bubbles in Asset Prices. (4) Lecture, three hours. Requisite: course 291A. De-
sign for graduate students. Introduction to forecasting methods and applications to asset pricing. Sign-


291A-291C. Teaching Apprentice Practicum. (1 to 4) Seminar, three hours. Workshops for pre-
dissertation and dissertation writers. Applications of time-series methods to analysis of asset prices; general method of moments, vector autoregressions, and maximum likeli-

Special Studies

375. Teaching Apprentice Practicum. (1 to 4) Semi-
nar, 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 Economics. (2) Seminar, one hour; laboratory, three hours. Designed for graduate students. Required of all new teaching assistants. Classroom practice in teaching, with individual and group instruction on related educational methods, ma-
terials, and evaluation. May be repeated for credit. S/U grading.

501. Cooperative Program. (2 to 8) Tutorial, to be ar-
ranged. Preparation: consent of UCLA graduate advis-
er and graduate dean, and host campus instructor, de-
partment chair, and graduate dean. Used to record en-
rollment of UCLA students in courses taken under cooperative arrangements with USC. S/U grading.

596. Individual Study. (2 to 8) Tutorial, to be ar-
ranged. Directed individual study or research. S/U grading.
**EDUCATION**

**Graduate School of Education and Information Studies**

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Patricia M. McDonough, Ph.D., Vice Chair

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Alison L. Bailey, Ed.D.
Mitchell J. Chang, Ph.D.
Sol Cohen, Ph.D.
Aimee Dorr, Ph.D., Dean
Megan L. Franke, Ph.D.
Patricia C. Gandara, Ph.D.
Sandra H. Graham, Ph.D.
Sandra Harding, Ph.D.
Tyrone C. Howard, Ph.D.
Carolee Howes, Ph.D.
Sylvia Hurtartado, Ph.D.
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Robert A. Rhoads, Ph.D.
Mike A. Rose, Ph.D.
Linda J. Sax, Ph.D.
Michael H. Selzer, Ph.D.
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Carlos A. Torres, Ph.D.
Noreen M. Webb, Ph.D.
Welford W. Wilms, Ph.D.

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Bengt Muthén, Ph.D.
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W. James Popham, Ed.D.
Val D. Rust, Ph.D.
Rodney W. Skager, Ph.D.
Romenia Tidewell, Ph.D.
Carl Weinberg, Ed.D.
Richard C. Williams, Ph.D.
Charles Z. Wilson, Ph.D.

**Associate Professors**

Christina A. Christie, Ph.D.
Robert Cooper III, Ph.D.
Noel D. Enyedy, Ph.D.
Rashmila S. Mistry, Ph.D.
Ernest D. Morrell, Ph.D.
John S. Rogers, Ph.D.
William A. Sandoval, Ph.D.
Concepcion M. Valadez, Ph.D.
Jeffrey J. Wood, Ph.D.

**Assistant Professors**

Li Cai, Ph.D.
David G. Garcia, Ph.D.
José-Felipe Martínez, Ph.D.
Edith Mukudi Omwami, Ph.D.
Thomas M. Philip, Ph.D.
Jane E. Pizzolato, Ph.D.
José Luis Santos, Ph.D.
Richard L. Wagoner, Ph.D.

**Adjunct Professors**

Diane Durkin, Ph.D.
Eloise Lopez Metcalfe, Ph.D.
Faye C. Peltzman, Ph.D.
Jody Z. Priselac, Ed.D.
Linda P. Rose, Ph.D.
Eugene Tucker, Ed.D.

**Adjunct Assistant Professor**

Bruce L. Barbée, Ed.D.

**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 Ph.D., an Ed.D., 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) provide 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 adviser in the Office of Student Services, 1009 Moore Hall, http://www.gseis.ucla.edu/edminor/. 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, M118 through M138, M146, M146B, and 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, M146A, M146B, M147, 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.

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, http://www.gdnet.ucla.edu/gasaa/library/pgmrqintro.htm. 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 (M.A.) and Doctor of Philosophy (Ph.D.) degrees in Education, Master of Education (M.Ed.) degree, Doctor of Education (Ed.D.) degree, Doctor of Philosophy (Ph.D.) degree in Special Education (with California State University, Los Angeles), and Doctor of Education (Ed.D.) degree in Educational Administration (with UC Irvine).

One articulated degree program (Education M.Ed./Latin American Studies M.A.) and one concurrent degree program (Education M.Ed., M.A., Ed.D., or Ph.D./Law J.D.) are also offered.

**Education**

**Lower Division Courses**

10. Introduction to Humanities, Social Sciences, and Scientific Inquiry. (4) Lecture, 50 hours; laboratory, 8 hours. Introduction to range of critical concepts in humanities, social sciences, and hard sciences.
es. 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, critical thinking journals, and participation in laboratory experiments. Application of these techniques 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 economic Latino communities. Offered in summer only. P/NP or letter grading.

80. Understanding Collegiate Experience. (4) Lecture, three hours; discussion, 90 minutes. Designed to help students understand experience 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.


92B. Practicum, (4) Seminar, three hours. Requisite: course 92A. 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 intent of enhancing academic and career perspectives. Letter grading.

92D. Development of Peer Mentoring. (4) Seminar, three hours. Requisite: course 92C. Second 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 intent of enhancing academic and career perspectives. Concentration on relationship between creativity and presentational 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 in learning principles and procedures relevant to peer mentoring. Undergraduate students present College of Letters and Science academic support workshops to their peers with intent of enhancing academic and career perspectives. Concentration on program assessment. P/NP or letter grading.

92F. Academic Success in Undergraduate Experience. (2) Lecture, one hour; discussion, one hour. Designed to promote understanding of factors involved in making academic transition 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 taken by peer researchers, policymakers, and education advocates as they respond to these issues. Laboratory portion of course engages students in small research groups where they engage in small research groups where they engage in examinations of major educational issues and approaches taken by researchers engaged in research. (2)

M102. Asian American Education and Schooling. (4) Same as Asian American Studies M114.) Seminar, four hours. Examination of existing body of research from various disciplines on Asian/Pacific American education and schooling experiences. 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 achievement and attainment; stratification between and within schools; effects of education on socioeconomic attainment; family, health, attitudes, and social participation; and emotional attributes of preschool and elementary school children. Letter grading.


118. Literacy in American Life. (5) Lecture, four hours. Introduction to literacy studies (study of reading and writing), with focus on American life. Readings on history of literacy in U.S.; studies of literacy in school, on job, and in everyday life; studies of literacy and electronic media; and self-study of development and use of students’ own literacy. Letter grading.

120. Early Childhood Development. (5) Seminar, four hours. Development of positive social behaviors and their enhancement. Review of children’s psychological development, with emphasis on person, social, and emotional attributes of preschool and elementary school children. Preparation for roles of prosocial behavior and modification of such negative behaviors as aggression. Review and evaluation of contemporary educational, social, and emotional attributes of preschool and elementary school children. Letter grading.

121. Introduction to K-12 Issues in American Public Education. (5) Seminar, four hours. Examination of American schooling experience (K-12) and analysis of various school and social policies that impact on children and classrooms. Syllabus examination of major participants in American schooling process (parents, students, teachers, geographical space of school environment, educational policies) and how they are associated with American schooling experience. Discussion of contemporary themes such as risk behaviors, SAT controversy, high school exit examinations, social promotion, and issues for classroom and school psychological development of children, school reform, equal educational opportunity, affirmative action, and educational assessment. Letter grading.

122. Perspectives on American College. (5) Seminar, four hours. Examination of historically diverse colleges and universities play in larger cultural life of U.S. society. Use of analysis of student movements as vehicle for exploration of key sociological, political, and cultural developments on U.S. campuses. Emphasis on interrelated research, academic, social, and political issues underlying diverse system of higher education. Letter grading.


C124. 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 C207. P/NP or 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 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 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 culture through various anthropological perspectives, 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. Focus on race, gender, sexual orientation, and class, and consideration of application of anthropological theory and methods to educational practice and research. Concurrently scheduled with course C207. Letter grading.

127. Educational Psychology. (5) Seminar, four hours. Research seminar providing broad overview of educational psychology, with examination of relationship of teaching and learning processes as to how children learn; issues of teaching and learning that arise based on child’s social class, ethnic background, gender, age, and level of ability. Letter grading.

128. Adolescent Psychosocial Development: Problems and Potentials. (5) Seminar, four hours. Research seminar providing overview of research literature on adolescent development and use of education environment as context for this development. Primary focus on adolescent development and presentation of research in nature and relation of topics to understanding of one’s identity, personal development, and relationships with other individuals and society at large. Study of psychological and education theories that apply to specific sub-samples of adolescents (e.g., women and adolescents of color), as well as those that are relevant to population of youth at large. Letter grading.

129. Education and Law. (5) Seminar, four hours. Research seminar providing overview of high-profile legal controversies that shape so many policy debates at both K-12 and higher education levels. Major areas of focus include campus speech codes, educational quality and law, broadbased right to equal educational opportunity, and Internet-related issues and concerns. Letter grading.

130. Race, Class, and Education Inequality in U.S. (5) Lecture, two hours; discussion, two hours. Focus extensively on understanding educational experiences of following groups in U.S.: African Americans, Asian Americans and Pacific Islanders, Chicanas/Chicanos/ Latinos, and low-income white Americans. Examination of how historical development of public education in U.S. has influenced its present form. Critical look at current college education, including debate over school reform, bilingual education, and affirmative action. Letter grading.


132. Education of Exceptional Individuals. (5) Seminar, four hours; fieldwork, three hours. Research seminar providing guided survey of special educational needs of students (elementary through high school age) who vary exceptionally from normal in mental, physical, psychological, and social characteristics. Exploration of world of disabilities and area of
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 and institutions shape child development and the social policy 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 the extent to which public policies and institutions shape child development and the social policy landscape in several major domains of child and family life.

134. Educational Leadership, Organizational Theory, and Policy. (5) Seminar, four hours. Designed for students interested in developing understanding and appreciation for breadth 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, four hours; fieldwork, four hours. Introduction to educational inquiry, with special attention to different ways of conducting research in field of education. Focus on current research ways anthropologists/investigator inquiry. Development of culminating project. Letter grading.

137. Public Policy in Higher Education. (5) Lecture, four hours. Introduction to range of contemporary and ongoing public policy issues and conceptual and theoretical frameworks typically used to understand them. Development of fluency 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. Consideration of potential of critical and cultural pedagogy as ways to study to confront, and transform many challenges faced in urban education today. Study of theory and research of critical pedagogists such as Paulo Freire, Peter McLaren, and others. 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 and shape human behavior, with specific emphasis on educational issues related to school reform, teen pregnancy, school violence, teacher burnout, teacher midlife crisis, cultural diversity, information-seeking behaviors today and how they are being addressed by legal and education communities. In particular, examination of real-life consequences of current laws and exploration 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 level skill set of joint interest to faculty advisor and professor and student. Research topics deal with K-12 American educational experience, with specific emphasis on diversity, assessment, technology, at-risk, geographical setting, and psychosocial development of children. Letter grading.

M145A-M145B. Restoring Civility: Understanding, Using, and Resolving Conflict. (4-4) (Same as Chicana and Chicano Studies M174A-M174B.) Lecture, one hour; discussion, three hours. Designed for students who want to learn principles of dialogue and mediation, as alternatives to violence, and practice how to apply them in educational settings. In Progress (M145A) and completion of course (M145B). Letter grading.

M145C. Alternatives to Violence: Peer Mediation in Public Schools. (4) (Same as Chicana and Chicano Studies M174C.) Lecture, one hour; fieldwork, three hours. Requisites: courses M145A, M145B. 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 leaders. 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 and 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 and 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. Lesbian, gay, bisexual, and transgender-related misconceptions that arise in schools, colleges, and universities today and how they are being addressed by legal and education communities. In particular, examination of real-life consequences of current laws and exploration of what might be done to make things better for all persons. Letter grading.


149. Innovation and Social Entrepreneurship in Education. (5) Lecture, two hours; laboratory, two hours. Exploration of charter schools as well as alternative methods for social 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 and focus on key role of field practice. P/NP grading.

152. Policy Analysis and Real Politics of Education. (3) Lecture/discussion, three hours. Exploration of relationship between scholarly policy analysis and actual workings of policy systems. Selected topics include achievement standards and assessment, school finance, equal access to education, and school reform. Letter grading.

170A. Experiential Learning: Community-Based Outreach Programs. (2) Fieldwork, four hours. Enforced corequisite: course 192A. Training and supervised practicum for undergraduate students interested in serving in their academic departments, or schools, and middle schools. Letter grading.

170B. Experiential Learning: America Reads. (2) Fieldwork, four hours. Enforced corequisite: course 192B. TB test required prior to first day of instruction. Training and supervised practicum for undergraduate students, including tutoring and mentoring of K-3 students at America Reads sites. Letter grading.


M182A. Language, Literacy, and Human Development Ethnography. (2) (Same as Afro-American Studies M182A.) Fieldwork, three hours. Enforced corequisite: course M194A. Students visit after-school site on weekly basis and use ethnographic 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 Afro-American Studies M182B.) Fieldwork, three hours. Enforced corequisite: course M194B. Students visit after-school site on weekly basis and use ethnographic methods to document learning. Opportunity for students to connect theories of development and language and literacy learning with practice. Letter grading.

M182C. Culture, Communications, and Human Development Ethnography. (3) (Same as Afro-American Studies M182C.) Fieldwork, six hours. Enforced corequisite: course M194C. Students visit after-school site on weekly basis and use ethnographic 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 Afro-American Studies M183A.) Fieldwork, six hours. Enforced corequisite: course M194A. Students visit after-school site on weekly basis and use ethnographic 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 Afro-American Studies M183B.) Fieldwork, six hours. Enforced corequisite: course M194B. Students visit after-school site on weekly basis and use ethnographic methods to document learning. Opportunity for students to connect theories of development and language and literacy learning with practice. Letter grading.

M183C. Culture, Communications, and Human Development Ethnography. (3) (Same as Afro-American Studies M183C.) Fieldwork, six hours. Enforced corequisite: course M194C. Students visit after-school site on weekly basis and use ethnographic methods to document learning. Opportunity for students to connect theories of development and language and literacy learning with practice. Letter 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
187. Variable Topics in Education. (5) Seminar, five hours. Limited to juniors/ seniors. Variable topics course organized around disciplinary knowledge central to development of core understandings of educational and learning processes, phenomenon, policies, methods, and instruction. Development of culminating project. Consult Schedule of Classes for topics and instructors. May be applied as core credit for Education Studies minor students. May be repeated three times for credit. Letter grading.

191A-191X. Current Issues in Education. (4 each) Seminar, four hours. Limited to juniors/seniors. Variable topics course organized on selected current issues, integrating field observations and readings through seminar discussions. Development of culminating 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. Requisite: course 185. Enforced corequisite: course 170B. Limited to juniors/seniors. Training and supervised practicum for advanced undergraduate students to provide opportunity to reflect on both content and experience pertaining to America Reads sites. Letter grading.

192Y. Undergraduate Practicum in America Reads. (2) Seminar, two hours. Enforced corequisite: course 170B. Limited to juniors/seniors. TB test required prior to first day of instruction. Training and supervised practicum for advanced undergraduate students 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, five hours. Enforced corequisite: course 193A. Limited to seniors. Seminar, five hours. Students 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 Development Research Group Seminars. (5) (Same as Afro-American Studies M194A.) 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 gender. May be taken independently for credit. Letter grading.

M194C. Culture, Communications, and Human Development Research Group Seminars. (5) (Same as Afro-American Studies M194C.) Seminar, three hours; laboratory, two hours (when scheduled). Enforced corequisite: course M182C or M183C. 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 technologies. May be taken independently for credit. Letter grading.

195. Community Internships in Education. (4) Tutoring, four hours. Enforced corequisite: course M186 or M187. 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 for peer review and presentation. May be repeated for credit. Individual contract with supervising faculty member required. Letter grading.


196R. Research Apprenticeship in Education. (2 to 4) Tutorial, three hours; weekly per unit. Limited to ju- niors/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 Education. (2 to 4) Tutori- al, 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.

199. Directed Research Project in Education. (2 to 4) Tutorial, to be arranged. 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

200A. Historical Research and Writing. (4) Lecture, four hours. Methods of historical research and writing for students who wish to develop their skills 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, three hours; laboratory, two hours. Requisite: course 200B. Introduction to techniques of processing and analyzing nonexperimental and quasi-experimental quantitative data. S/U or letter grading.

201C. History of American Education. (4) Seminar, four hours. History of educational thought and of social forces impinging on American education from 1880 to present. Analysis of relation between these ideas and forces, and aims and practices of American education today. S/U or letter grading.


203. Educational Anthropology. (5) Seminar, five hours. Research seminar designed to familiarize stu- dents with discipline of anthropology and subfield of anthropology and education. Examination of the concept of culture through various anthropological perspectives, with focus on theories of culture, cultural transmission and acquisition, and cultural reproduction and production for understanding schooling and its outcomes. Ex- amination of research methodologies in anthropology, as well as critical historical overview of discipline and current debates and dilemmas of doing anthropologi- cal research in educational settings. Issues of race, gender, sexual orientation, and class, and consider- ation of application of anthropological theory and methods to educational practice and research. Con- curring 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 under comparative edu- cation. Particular attention to development of field and to styles of social analysis that may be applied to compa- rative and cross-national studies in education. S/U or letter grading.

204D. Minority Education in Cross-Cultural Per- spective. (4) Lecture, four hours. Historical and con- temporary analyses of educational policies with regard to ethnic, religious, and linguistic minorities through se- lected national and international case studies. Intro- duction to cross-cultural education in representative countries in relation to social, political, and economic systems. S/U or letter grading.


204F. Nonformal Education in Comparative Per- spective. (4) Lecture, four hours. Comparative and in- ternational study of organized and systematic educa- tional activity for children, youth, and adults carried on outside of schools. Types of programs include, among others, consciousness raising, community action, skills training, literacy, and extension programs. S/U or letter grading.

205. Computers in Educational Process. (4) Lecture, four hours. Introduction to theory, experimenta- tion, evaluation, and future of computer systems in ed- ucation, emphasizing on computer assisted instruc- tion (CAI), and use of computers to teach programming and to foster development of writing, computational, and filing skills. S/U or letter grading.


206C. Introduction to Conceptual Analysis. (4) Lecture, four hours. Conceptual analysis of recurrent and contemporary themes in field. Emphasis on develop- ment of logical and linguistic skills used in analysis of educational problems and issues. S/U or letter grading.

207. Politics of Education. (5) Lecture, two hours; discussion, two hours. Political dimensions of educa- tion institutions as organizations. Relationships between education 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 Freeeain 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 education- al opportunity, structure of educational organization,
208A. 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 from vantage point of various social and behavioral sciences disciplines. S/U or letter grading.

209C. System of Higher Education. (4) Lecture, two hours. Analysis of structure and function of American postsecondary educational system from systems perspective. Emphasis on structure of system and comparative characteristics (faculties, student bodies, finances, outputs) of different types of institutions. S/U or 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 series of faculty presentations, selected readings, and writing assignments. Letter grading.


211C. Advanced Item Response Theory. (4) Lecture, four hours. Requisites: course 211A or 211B or Psychology M258B. Review of standard item response theory models, multidimensional models, multiple group models and models with covariates, item and person parameter estimation, differential test bias, rating scales, 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, encoding, memory, transfer, individual differences, and instruction. S/U or letter grading.


213C. Group Counseling Theory and Process. (4) Lecture, three hours; discussion, one hour. Requisite: course 414A. Group productivity, leadership in groups, social perception, attitude formation, and effect of behavior changes in individuals and groups. Evaluation of social, psychological, and educational principles related to therapeutic experiences of groups of small groups. Letter grading.

213D. Assessment in Counseling and Student Affairs. (4) Lecture, four hours. Overview of assessment issues as they relate to evaluation of counseling and student affairs activities. Emphasis on concepts of testing and 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 various theoretical and practice orientations 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 Intra- and Interprofessional Roles. (4) Lecture, four hours. Requisites: courses 212A, 212B. 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., attributional styles, self-esteem) to motivation and personality development. Letter grading.


217A. Social Development and Education. (4) (Formerly numbered M217A.) Seminar, four hours. Biologic and social developmental issues, with attention to the socialization of children; development of family and social institutions; human development in current research and developmental models. 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.

M217C. Personality Development and Education. (4) (Same as Psychology M236A.) Lecture, four hours. Research of theory and research 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.

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.

M217F. Adolescent Development. (4) (Same as Psychology M242G.) Seminar, four hours. Designed for graduate students. Review of recent research on physical, cognitive, social, and psychological development during second decade of life. Topics include personality development, changes in parent/adolescent relationships, role of peers, identity development, high-risk behaviors, school leaving, and coping, and school adjustment. Letter grading.


218. Measurement of Educational Achievement and Aptitude. (4) Lecture, four hours. Requisite: course 230A. Critical study of tests of achievement and aptitude, with emphasis on group tests; relation of achievement to aptitude; social implications of measurement of intelligences; elements of validity and reliability. S/U or letter grading.

219. Laboratory: Advanced Topics in Research Methodology. (4) Laboratory, four hours. Provides as- sessment in design and evaluation 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.

220A. Inquiry into Schooling: Organization and Change. (4) Lecture, four hours. Critical analysis of issues in reconstruction of schooling; concepts of function and structure of schooling; organization theory; systems approaches in analysis of organization development and change. 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 in educational 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: participant-observer field method. 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 research project started in course 222B, with focus on practical skills and concepts/ methodological issues involved in reducing and analyzing qualitative data. Letter grading.

222D. Qualitative Inquiry: Special Topics. (4) Lecture, four hours. Special topics in the research process or specific field or aspect of qualitative inquiry. Topics may include classroom ethnography, advanced ethnographic writing and multimedia design, discourse analysis, and micro-ethnography of social interaction. S/U or letter grading.

223. Aesthetics and Curriculum. (4) Lecture, two hours; discussion, two hours. Examination of various ideas and theories in aesthetics and application of these in school settings. S/U or letter grading.

224. Problems and Issues in Bilingual and Multicultural Education. (4) Lecture, two hours; discussion, two hours. 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.

225A. Issues in Education of Exceptional Individuals. (4) Lecture, four hours. Designed for graduate stu- dents. Analysis of major contemporary trends, issues, and programs for exceptional
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viduals; consideration of commonalities and differenc- es 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 225B. 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 Charac- teristics of Exceptional Individuals. (4) Lecture, four hours. Requisite: course 227B. Analysis of social 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 221. 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) Seminar, four hours. Research on selected topics in fields of administration, policy, curriculum, and teaching studies and on conceptualization of hypothe- ses and research programs on division topics and issues. Letter grading.


231D. Advanced Quantitative Models in Nonexperi- mental Research: Multilevel Analysis. (4) Lecture, four hours. Requisites: courses 230B, 230C. Examination of conceptual, substantive, and methodological is- sues in analyzing multilevel data (i.e., on individuals in organizational settings such as schools, corporations, hospitals, communities); consideration of alternative analytical models. Letter grading.


233. Professional Writing in Education. (4) For- merly numbered 233A.) Lecture, four hours. Intended to assist in professional development as writers, with focus on style and organization, scholarly genres, modes of discourse, and broader issues of conceptual- ization and method. Letter grading.

234. Education and Social Stratification. (4) Lec- ture, four hours. Relationship between education and components of social stratification, in computer occupa- tions and earnings. Competing theories used in study- ing education and social stratification; relevant re- search. Conclusions regarding individual career deci- sions, social policies, and theories of society. S/U or letter grading.

235. Theory and Practice of Leadership. (4) Discus- sion, four hours. Review of theory and practice of leader- ship in different organizational contexts, with special focus on higher education. Variety of questions addressed, including what is leadership, differences between leadership and management, role of leader- ship in institutional transformation. Letter grading.


237. Law and Urban Education. (4) Lecture, four hours. Examination of recent legal controversies that may impact ability of urban educators to meet needs of students in multicultural society, with special emphasis on such equity-related issues as desegregation, school finance, standardized testing, and rights of lan- guage minority students. Letter grading.


239. Organization and Governance of Educational Systems. (4) Lecture, four hours. Academic organiza- tions, precollege and postsecondary, are most appro- priately studied as complex, hierarchical organiza- tions. Emphasis on characteristics of educational institutions and systems as organizations: environ- mental relations, governance structures, processes, and patterns of decision making and policymaking. S/ U or letter grading.


246A. Decision Analysis and Advanced Computer Methods for Educational Policy and Planning. (4) Seminar, four hours. Requisite: course 242. How infor- mation technology and decision analysis impact K-12 schooling, higher education, and technical training/ workplace settings. With research paper, oral presen- tation, and two research briefs, students can pursue decision analysis areas of special interest to their pro- fessional and career objectives. S/U or letter grading.

247. Special Topics in Law and Educational Policy. (4) Lecture, four hours. Policy-based inquiry with focus on specific law-related debates that inevitably influ- ence both K-12 and higher education communities. Identification of strategies that have been successfully employed by those who use law to shape educational policy. Letter grading.

248. Seminar: Special Topics in Child Develop- ment and Education. (4) Seminar, four hours. Con- tent varies; limits of investigation set by individual in- structor. S/U or letter grading.
249B. Seminar: Institutional Research and Program Evaluation. (4) Seminar, four hours. Critical review of institutional evaluation studies, with consideration of scope of information needed for various purposes and problems of interrelating this information to appraise overall institutional functioning and effectiveness. 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 constitute this division, with emphasis on understanding social and political issues that shape higher education and organizational change. Letter grading.

250B. Organizational Analysis of Higher Educa- tion. (4) Seminar, two hours. Designed for graduate students. Two-course sequence designed to orient new students to issues, ideas, and literature that constitute this division, with emphasis on understanding social 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 science theories used to explain institutions and issues of contemporary higher education. Explanation of how theory and methodology affect research design and framing of research questions in studies of higher education. Letter grading.

251A. Seminar: Philosophy of Education, Episte- mology. (4) Seminar, four hours. Analysis of epistemological alternatives to empiricism and their relevance to educational research, planning, and practice. S/U or letter grading.


252A. Seminar: Educational Organizations. (4) Seminar, four hours. Requisite: course 250A. 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 Comparati- ve Education. (4) Seminar, two hours. Early numbered 253A. (Same as Women's Studies M253A.) Seminar, four hours. Examination of some of most influential critical theorists, including Marx, Nietzsche, Freud, Marcuse, Foucault, and others, 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 Societ- ies. (4) Seminar, four hours. Multidisciplinary and comparative study of socialist educational theory examined through the writings of Marx, Lenin, Mao, and others. Implementation of this theory in specific case studies, along with comparative assessments of nonsocialist 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: Chicano/Hispanics and Educa- tion. (4) Seminar, four hours. Basic issues and topics related to Chicanos and other Hispanic groups in edu- cation. Review of literature on specific educational levels and Chicano student progress (e.g., early childhood, elementary, higher education; specific top- ics: assessment, access, tracking, segregation; impli- cations 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 af- fecting social change. Case studies of educational changes in coun- tries of Middle East and Islamic world (including Pacific Rim, South and Central Asia). S/U or letter grading.


255A-255B. Seminar: Special Topics. (4-4) Seminar, four hours. May be repeated for credit. S/U or letter grading. 255A. Measurement; 255B. Design.

256. Seminar: Data Analysis. (4) Seminar, four hours. S/U or letter grading.


256B. Seminar: Special Topics in Development. (4) Seminar, four hours. S/U or letter grading.

257. Seminar: Research in Counseling Psycholo- gy. (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 Re- search. (4) Seminar, four hours. S/U or letter grading.

258B. Seminar: Problems in Instructional Develop- ment. (4) Seminar, four hours. S/U or letter grading.

259A. Seminar: Research on Characteristics of Students. (4) Seminar, four hours. Analysis of con- cepts, methodology, and conclusions or implications underlying and resulting from major research on student characteristics. Emphasis on differential impact of higher education and student and faculty development. S/U or letter grading.


261E. Higher Education Seminar: Diversity Issues and Research Perspectives. (4) Seminar, four hours. Examination of how racial diversity and its related dy- namics have transformed and at same time been re- shaped by institutions of higher education, with focus specifically on student experiences, curricula, institu- tional climate, educational policies, and administrative practices. Letter grading.

261F. Seminar: Cognitive and Personal Develop- ment of College Students. (4) Seminar, four hours. Examination of cognitive development of college stu- dents; issues of personal and social development, in- cluding 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/Multi- cultural Education. (4) Seminar, four hours. S/U or letter grading.

262H. Economics of Urban Schooling. (4) Lecture, two hours; discussion, two hours. Examination of prin- ciples and tools of policy analysis and their application to enhance urban school decision making and ef- fectiveness. Use of economics and equity as umbrella lenses and drawing on multiple supplementary lenses and perspectives (from disciplines including history, law, political science, psychology, and sociology) to ex- amine urban schooling issues and context and dis- course of public policy genesis, implementation, and impact. Constructing and deconstructing of policy propositions, educational reform and transforma- tion in terms of need for change and change pro- posal feasibility and desirability. Methods include de- velopment of arguments supporting contrasting views of policy issues, contention and counter-contention propositions, and supporting advocacy, persuasion, and substantiation appropriate to various forums such as congressional testimony, public politi- cal dialogue, and academic research venues. Letter grading.

262J. Entrepreneurial Leadership and Education: Seminar for Education and Business Leaders. (4) Seminar, two hours; discussion, two hours. Seminar for education and business leaders to explore con- cepts and processes of becoming entrepreneurial leaders — meeting today’s educational challenges by internalizing and applying skills and thinking used by successful entrepreneurs. 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 250A, 250B. Understanding public policy for higher education requires under- standing of both issues and policy process. Review of major topics on which U.S. government is active, as well as key actors and their influence. Letter grading.

266. Seminar: Women’s Studies in M266. Lecture, four hours. Examination of how diverse feminist social theories of last quarter century have both chal- lenged and strengthened conventional social sciences theories and their methodologies. Introduction espe- cially to feminist standpoint theory, distinctive critical theory methodology now widely used in social scienti- cs. 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 poststruc- turalist, feminist, deconstruction, reader reception, and semiotics, and to core ideas of some leading theorists of reading, such as Roland Barthes, Wolfgang Iser, Barbara Johnson, Stanley Fish, and Gayatri Spivak. Letter grading.

269. Representations of Education in Cinema. (4) Lecture, two hours; discussion, two hours. Designed for graduate students. Exploration of ways in which we draw on diverse “texts,” particularly films set in or around schools, to illuminate and highlight social 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 different methods of cultural interpretation, seminal cultural studies texts, 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 research topics in field of educational psychology, including top- ics related to human development, learning and in- struction, counseling, and special education, and to different methodological approaches used to study them. S/U grading.

272. Case-Study Research in Education Policy and Practice. (4) Discussion, four hours. Focus on use of case- study methods in education research, reviewing oppor- tunities for applying methodological skills to actual case-study research projects. Focus on single and multiple case studies that investigate issues in educa- tion policy and practice. Letter grading.
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273A. Structure and Dynamics of Educational System. (4) Lecture, two hours; discussion, two hours. Overview of school administration, teaching, curriculum, and policy studies. Focus on American education as institutional system wherein federal, state, and local policy, school administration, curriculum theory and design, and teaching are indirectly connected in delivery of education. 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 theories of knowledge and how to do maximally objective research emerging from these literatures. Letter grading.

275. Racial and Educational Seminar, four hours. Designed for graduate students. Examination of role of race in educational policymaking. Exploration of broad interpretation of how school contributes to racial stratification and socialization into sociocultural 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 definitions 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.


278. Contemporary Theories of Writing. (4) Lecture, four hours. Review of current theories of writing and literacy definitions 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.

CM278L. Critical Media Literacy and Politics of Gender: Laboratory. (2) Same as Women’s Studies CM278L Laboratory, two hours. Corequisite: course CM278. Hands-on production experience as integral component of course CM278L. Concurrently scheduled with course CM178L. Letter grading.

279. History of Urban Schooling. (4) Lecture, four hours. 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. Vast economic transformations, brought about by globalization of workplace and dramatic decline of industrial employment in advanced nations, not only greatly raise stakes on creating equal opportunity but also cut off what were previously extremely important parts of international progress. 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. 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, four hours. Discussion of strategies to improve the academic preparedness and college readiness of high school students. Letter grading.

282. Students at Risk: Reconsideration. (4) Seminar, four hours. Designed for second-year graduate students. Notion of at risk has become standard element of biomedical/public health and educational/so- cial sciences discourse and required entry into range of disciplines and modes of inquiry. Letter grading.

283. Social Research in Multicultural and Postcolo- nial World. (4) Lecture, four hours. Philosophical view of sociocultural theories that focus on how to think fruitfully 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.

284. Critical Theory in Education: Power, Politics, and Liberation. (4) Lecture, four hours. Designed for graduate students. Introduction to major ideas, issues, and methodologies within what has come to be known as “critical and educational tradition,” including some major theoretical approaches, such as neo-Marxist, left liberal/postmodernist, and Marxist subfields of critical education tradition. Letter grading.


M286. Culture, Brain, and Development. (4) Same as Psychology M233, Linguistics M233, Sociology M234, and Psychology M248.) Seminar, 90 minutes every other week. Interdisciplinary seminar series to provide students with exposure to current research in understanding complex relationship between culture, brain, and development. S/U grading.

287. Research on Language Issues in Education. (4) Seminar, four hours. Roles of language(s) in formal and informal education, including study of opportunities and challenges offered by language variation found in schools. Examination of language acquisition theories along with those of language ideologies, language policies, and multilingualism. Letter grading.

288. Research Apprenticeship Course. (2) Discussion, two hours. Course facilitates mentorship model of training Ph.D. students in education, with focus on development of critical skills and community. Letter grading.

M289A-M289B. Immigration, Racial Change, and Education in 21st-Century Metropolis. (4) (Same as Political Science M287A-M287B, 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. Vast economic transformations, brought about by globalization of workplace and dramatic decline of industrial employment in advanced nations, not only greatly raise stakes on creating equal opportunity but also cut off what were previously extremely important parts of international progress. Letter grading.

289. Educational Policy Analysis: Research, Theo- ry, and Practice. (4) Seminar, four hours. Broad overview of development of field 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.

290. Organizational and Leadership Theory in Edu- cation. (4) Lecture, four hours. Introduction to con- temporary and historical conceptions of organization and leadership in context of formal schooling. Exploration of these conceptions discloses deep inquiry into school and college settings. Letter grading.

292. Curriculum Theory, Research, and Practice. (4) Seminar, four hours. Survey of history of theories and perspectives shaping what is taught in schools, providing graduate students broad understanding of various values, beliefs, and power relations shaping K-12 curriculum in U.S. Letter grading.

293. Teaching Studies: Research and Theory into Practice. (4) Seminar, four hours. Exploration of his- torical, theoretical, and empirical perspectives related to teaching and teacher education, providing graduate students with broad overview of relevant literature and current issues shaping teaching profession in U.S. Letter grading.

294A-294B. High School Reform: Persisting Fail- ure, Urgent Challenges. (4) Seminar, four hours. Course is offered as part of a yearlong seminar with focus on what is probably most serious and neglected problem in American educational reform. In past half century real progress has been made in some areas of educational reform, but gains in achievement are minimal, and some initiatives have been produced and very well-regarded system of higher education has been established — but reform of high school has failed. Exploration of institutional and policy roots of these problems and assessment of available research on key dimensions to help students launch original research studies in one related area. Presentations by experts actively involved in high school reform efforts included. In Progress (294A) and letter (294B) grading.

295. Freire. (4) Seminar, four hours. Requisite: course C125 or C207 or prior knowledge of Freire’s work. Analysis of intellectual and political roots of Paulo Freire linked to social contexts in which it took place. Study of his life and work in five phases: Brazilian Experience (1921 to 1964); Chilean Experience, where he published Education as Practice of Freedom and Pedago- gy of Oppressed, as well as other lesser-known works, while also devoting most of this period to empirical research in literacy training (1964 to 1969); his work at Harvard, and then World Council of Churches in Geneva (1970 to 1980), including his consulting with postcol- onial revolutionary governments in Africa; his return to Brazil and his work as Secretary of Education in São Paulo (1989 to 1992), and his return to Brazil 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 insights in world, his importance, his narrative, and comparisons with other theoretical refer- rants. Letter grading.

296A-296F. Seminars: Research Topics in Educa- tion. (2 each) Seminar, three hours. Advanced study and analysis of current topics in education. Discussion of current research and literature in research specialty of faculty member teaching course. S/U grading.

296G. Research Topics in Education: Legal As- pects of Educational Management. (4) Lecture, two hours. Examination and analysis of legal issues, espe- cially as they apply to school organizations. Letter grading.

296H. Research Topics in Education: Organiza- tional Theory. (2) Lecture, two hours. Examination and analysis of organizational theories, especially as they apply to school organizations. Letter grading.

M297. Interdisciplinary Relationship Science. (4) (Same as Anthropology M255S, Psychology M256, and Sociology M270.) Lecture, three hours. Limited to graduate students. Diverse approaches to relationship science in fields of anthropology, education, psychol- ogy, and sociology. Focus on theme of understanding bi- ological, behavioral, and cultural aspects of relationship through diverse theoretical and methodological approaches. Use of broad definition of interpersonal relationships, including relationships such as parent-
child, teacher-student, sibling, peer, kin, relational relationships, marriages, and friendships. S/U or letter grading.


299A-299B-299C. Research Practicum. Education. (4 to 8 each) Clinical, to be arranged. May be repeated for credit. S/U or letter grading.

300. Dissertation Writing Workshop: Interdivisional Seminar. (4) Seminar, one hour; discussion, two hours; laboratory, one hour. Limited enrollment. Introduction for doctoral candidates 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 functions 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 personal and community health. Topics 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 needed by all content area teachers of English language, including strategies for teaching in and through English. Topics include educational issues, organizational approaches, and communicative approach; strategies and activities. 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. S/U grading.

311. Principles and Methods of Computer Literacy and Classroom Application — K-12. (2) Lecture, one hour; laboratory, 30 minutes. 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 skills discussed. S/U grading.


315B. Elementary Literacy Methods. (3) Seminar, three hours. Theoretical principles and pedagogical strategies necessary for developing and maintaining balanced comprehensive literacy program for elementary students. Focus on how children learn to read, write, and use language. S/U 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 and focuses literacy, technology, and strategies for second language learners. Aligned with California state frameworks and California content standards for grades K-12 that address needs and interests of diverse students. S/U 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 focuses literacy, technology, and strategies for second language learners. Aligned with California state frameworks and California content standards. S/U grading.

318C. Integrated Methods for Elementary Teachers. (3) Lecture, two to six 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 focuses literacy, technology, and strategies for second language learners. Aligned with California state frameworks and California content standards. S/U grading.


320A-320B-320C. Secondary Content and Literacy Methods. (3) Lecture, two to six hours; fieldwork, one hour. Examination and development of instructional programs and analyses and practices of instructional methods for teaching content in grades 7-12. Emphasis on interdisciplinary approach that integrates content areas and focuses 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. S/U grading.


330A. Observation and Participation. (2 to 6) Site-based fieldwork. 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 use of educational technology. S/U grading.

330B. Student Teaching. (4 to 8) Site-based fieldwork, 10 to 20 hours. Requires: course 330A. Students are assigned to student teach in designated school sites with racially, culturally, and linguistically diverse student populations. Throughout 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.

330C. Student Teaching. (4 to 8) Site-based fieldwork, 10 to 30 hours. Requires: 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 school districts with racially, culturally, and linguistically diverse student populations. Students also work in collaborative teams. Must repeat Student Teaching Education Program to initiate change project in their local school and/or complete case study project on S/U grading.

330A-360B-360C. Novice Seminars, (3-3-3) Seminar, three hours. Analysis of basic principles and concepts of planning, conducting, and evaluating units of curriculum and instruction. Examination 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 ethnographic inquiry of local community of their designated partner school district. S/U grading.

330B. Site 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.

330A-390B. Colloquium Series: Psychological Studies in Education. (1-1) Seminar, one hour. Researcher- or seminar-linking studies in Psychology Studies in Education (PSE) Ph.D. students. Training to conduct research that has practical implications as well as theoretical significance within field of applied human development. Students are trained to conduct research on human personality and social development in educationally relevant settings such as schools and daycare programs. Series of seminars explores social sciences 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 investigators and institutions. 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.

es, selection of learning experiences, organization of curriculum, and curriculum evaluation. S/U or letter grading.


405A-405B-405C. Teaching in Urban Schools. (3-3-3) Seminar, three hours. Limited to credential program students. Letter grading.

405A. Exploring Communities. (3) Seminar, three hours. Limited to credential program students. Learning about communities by critically examining students’ own beliefs, assumptions, and experiences about them to deepen understanding and appreciation about urban communities. Letter grading.

405B. Exploring Identities. (3) Seminar, three hours. Limited to credential program students. Examination and reflection on student values, beliefs, assumptions, and lives to determine how these factors shape ways students view their world and, in particular, teaching, learning, students, their families, and their neighborhoods and communities. Letter grading.

405C. Exploring Family-School Connections. (3) Seminar, three hours. Limited to credential program students. Exploration of partnerships among families, communities, and school systems, engaging parents, caregivers, guardians, students, and school personnel to develop strategies for working with families and to develop philosophy of education. Letter grading.

406. Social Foundations and Cultural Diversity in American Education. (3) Lecture, three hours. Intensive consideration of American society, particularly its racial and cultural diversity, including historical development of American society, manifestations of cultures, and ways to learn about students’ cultures. Examination of issues of racism, ethnicity, and gender differences, perspectives of cultural diversity, and impact on educational and classroom instruction. Letter grading.


408B-408U. Language and Culture. (2 each) Lecture, two hours. Exploration of complex nature of culture and impact of cultural diversity in urban classroom through activities, discussions, and role-playing, allowing novice teachers to understand and participate in rich cultural diversity of urban Los Angeles. By exploring culture as tool and target for increasing understanding of multicultural diversity, teachers may construct meaningful connections to students, communities, and home cultures. Each course may be taken independently for credit. Letter grading. 408B. Latino/Latin American Emphasis. 408C. Asian American Emphasis. 408D. African American Emphasis. 408U. General Topics.

409. Language Structure, Acquisition, and Development. (3) Lecture, four hours. Theoretical foundations of language structure and first and second language acquisition, with focus on major themes in current research that provide framework for schooling of English language learners. Rationale for bilingual/English language acquisition and development programs. Historical and current theories and models of language. Letter grading.

410A-410B. Language in Higher Education and K-12. (4-4) Lecture, four hours. Two-course sequence providing overview of higher education systems. Letter grading. 410A. Designed to develop knowledge, understanding, and appreciation of dynamics of higher education and of the issues that impact higher education, with focus on both theory and practice. Study of relationships among institutions of higher education in the United States. The course is offered as a two-course sequence and is intended for students majoring in higher education and school administration. 410B. Application of issues that affect both higher education and K-12 schooling, including re-

424A. Social Studies in Curriculum. (4) Lecture, four hours. Advanced study in social studies curricula development; problems in defining objectives and organizing single and multidisciplinary programs; critical review of literature on cognitive and affective learning in social science, with emphasis on experimental study of curricula. S/U or letter grading.

424B. Reading in Curriculum. (4) Lecture, four hours. Requisite: course 230A. Study of reading curricula and instructional procedures, with emphasis on rationale and research underlying their development and research comparing their effectiveness. S/U or letter grading.

424G. Curriculum Design for Bilingual Education. (4) Lecture, four hours. Advanced study of curriculum design for bilingual programs. Philosophical basis for bilingual programs; theories of learning and instruction applied to bilingual learner; language assessment; development of instructional component; program design and implementation. Letter 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 of college and university organizations, resource allocations, 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.

433A. Design of Learning Environments. (4) Discussion, four hours. Theory and practice of design of technology-supported learning environments. Examination of learning theory and design of learning environments in classrooms and informal settings and how research on such environments informs theory and design. 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 prototype 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, organization, and supervision of 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-sub stantiated elements of instruction: task analysis, appro priate instructional 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.

441B. Instructional Supervision B. (4) Lecture, four hours. Requisite: course 441A. Basic techniques of script-taping instructional episodes, planning teacher conferences through analysis of script-tapes, conduct ing and analyzing growth-evoking teacher conferenc es. Conducting case studies to demonstrate elements of good instruction. 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 sys tems in U.S.; constitutional dimensions of education relations; employees' civil rights and legal aspects of hiring, firing, and negotiating procedures; student at tendance, control, and civil rights. S/U or letter grading.

443. Policy Analysis in Education. (4) Lecture, four hours. Overview of political, economic, and legal con text of educational policy formation. Included in exami nation are issues that impact on minorities (e.g., bilin gual, desegregation, affirmative action, role of subordinates in policy making process). S/U or letter grading.

444B. Equality of Educational Opportunity through Desegregation and Finance Case Law. (4) Lecture, four hours. Requisite: course 442B. Concentrated review 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 urban school leadership. Emphasis on changing nature of urban principal ship, with considerable attention to role of other school and community agencies that interact with urban school leadership. S/U or letter grading.

448B. Urban Leadership Laboratory. (4) Laboratory, four hours. Analysis of and opportunity to practice human and technical skills requisite for success as urban school leaders. Topics include negotiations, conflict resolution, applied computer 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. Emphasis on understanding of traditional and contemporary conceptions of leadership and organizational theory, with applica tion of these conceptions to student professional work settings. Letter grading.

452A-452B. Educational Enterprise. (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 purposes of education governance, finance, access, and equity. 452B. Requisite: course 452A. Focus on educational environments, organizations, and curriculum and instruction.

453. Technology in Education: Learning and Lead ing with Technology. (2) 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 Leader ship Program students. Students carry out full cycle of action research at educational site. Projects done in teams as they observe 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. Second course in two-course sequence on learning how to do and use action re search. Honing of team processes and team roles while collaborating on data collection and analysis at educational site. Letter grading.

455. Writing and Inquiry. (4) Formerly numbered 455A, Lecture/workshop, eight hours per month; dis cussion, one hour; laboratory, one hour. Limited to doctoral students in Educational Leadership Program. Limited to first two years of study development as writers, addressing style and organization, scholarly genres, modes of discourse, and broader issues of conceptualization and method. Letter grading.

456. Altering Structures and Course of Schooling. (4) Lecture, four hours; discussion, four hours. Limited to Educational Leadership Program students. Using applied orientation, examination of variety of approach es, organizational change, and ways to sustain change. Letter grading.

457. Student Development across K-16 Spectrum. (4) Discussion, four hours. Limited to Educational Leadership Program students. Theories of student de velopment applicable to K-12 and postsecondary edu cation. 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-eff ec tiveness evaluation. S/U or letter grading.

462. Seminar: Community College. (4) Seminar, four hours. Topics include problems and practices in community college formation, instruction, student flow, administration, and/or evaluation. S/U or 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 in structional practices that integrate use of technology in urban public schools. Study and analysis of compre hensive specialized use of appropriate computer-based technology to facilitate teaching and learning in urban settings, and development of 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 pro grams for development of academic language, comprehen sion, and knowledge in core academic curricu lum. Letter grading.

482C. Instructional Strategies in Urban Education: Special Populations. (4) Lecture, four hours. Empha sis on instructional practices that support special popula tions in urban public schools. Continuation of study of statutory provisions, curriculum, instruction, and as sessment issues related to: students with dis abilities, students who are at risk, and students who are gifted and talented. Research opportunities, addi tional methods in content areas for advanced study, and engagement in the M.Ed. program. Letter grading.

485. Advanced Study of Health Education. (1) Lecture, four hours. Student meetings with instructors, field specialists, and team cohorts to study and ana lyze 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 conclusions 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 of each student, additional methods in content areas, and preparation of M.Ed. portfolio included. Letter grading.

498A-498B-498C. Directed Field Experience. (2 to 8 each) Clinical, to be arranged. Field experiences designed to increase understanding of student fields of study. May be repeated for credit. S/U or letter grading.

499A-499B-499C. Advanced Directed Field Experience. (4 to 8 each) Clinical, to be arranged. May be repeated for credit. S/U or letter grading.

501. Cooperative Program in Special Education. (2 to 8) Tutorial, to be arranged. Preparation; consent of UCLA academic advisor and graduate dean, and host campus instructor, department chair, and graduate dean. Limited to UCLA doctoral students in special education. Used to record enrollment in practicum courses taken under cooperative arrangements with USC. S/U grading.

596. Directed Independent Study. (4 to 12) Tutorial, to be arranged (four hours for every 4 units). Individual study or research for graduate students. May be repeated for credit. S/U or letter grading.

597. Preparation for Master's Comprehensive Examinations or Doctoral Qualifying Examinations. (4 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.


ELECTRICAL ENGINEERING

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Professors

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Lieven Vandenberghe, Ph.D.
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Kung Yao, Ph.D.

Professors Emeriti

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Associate Professors

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Jin-Hyung Lee, Ph.D.
Dejan Markovic, Ph.D.
Benjamin S. Williams, Ph.D.

Adjunct Professors

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Mary E. Eshaghi-Jinariu, Ph.D.
Michael P. Fitz, Ph.D.
Ingrid M. Verbraeck, Ph.D.
Eli Yablonovitch, Ph.D.

Scope and Objectives

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 efforts 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 major is a designated capstone major. Undergraduate students complete a design course in which they inte-
grate 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 B.S.**

**Capstone Major**

The undergraduate curriculum allows Electrical Engineering majors to specialize in one of three emphasis areas or options. The three options are structured as an electrical engineering degree, and the only degree offered to undergraduate students by the department is the Bachelor of Science degree in Electrical Engineering.

No distinction is made among the three options: (1) electrical engineering (EE) option is the regular option that provides students with preparation in electrical engineering with a range of required and elective courses across several disciplines; (2) computer engineering (CE) option provides students with preparation in embedded systems and software and hardware issues. Students replace some of the senior courses in the regular EE option with computer engineering-oriented courses or computer science courses; and (3) biomedical engineering (BE) option provides students with exposure to additional chemistry and life sciences courses and helps them meet most of the premedical preparation requirements so that they are prepared for careers in bioengineering, medicine, or electrical engineering.

**Electrical Engineering Option**

**Preparation for the Major**

**Required:** Chemistry and Biochemistry 20A; Computer Science 31, 32; Electrical Engineering 1, 2, 3, 10, M16 (or Computer Science M51A); Mathematics 31A, 31B, 32A, 32B, 33A, 33B; Physics 1A, 1B, 4AL, 4BL.

**The Major**

**Required:** Electrical Engineering 101, 102, 103, 110, 110L, 113, 115A, 115AL, 121B, 131A, 132A, 141, 161, Mathematics 132, Statistics 105; three technical breadth courses (12 units) selected from an approved list available in the Office of Academic and Student Affairs; and three major field elective courses (12 units), one design course (4 units), and one laboratory course (2 to 4 units) selected from the computer engineering pathway as follows: three major field elective courses from Biomedical Engineering CM186, Electrical Engineering 14, 132A, 141, and 176 or Mechanical and Aerospace Engineering 105A; one capstone design course from Electrical Engineering 113D or 180D; and one laboratory course from Biomedical Engineering CM187 or Electrical Engineering M171L (or by petition from 194 or 199).

**For information on University and general education requirements, see the College and Schools section earlier in this catalog.**

**Biomedical Engineering Option**

**Preparation for the Major**

**Required:** Chemistry and Biochemistry 20A, 20B, 20L, 30A, 30AL; Computer Science 31; Electrical Engineering 1, 2, 3, 10, M16 (or Computer Science M51A); Life Sciences 2, 3, 10, 105, 114, 132, 132A, 141, 161, Mathematics 132, Statistics 105; three major field elective courses from Computer Science 118, Mathematics 132, Statistics 105; three technical breadth courses (12 units) selected from an approved list available in the Office of Academic and Student Affairs; and three major field elective courses (12 units), one design course (4 units), and one laboratory course (2 to 4 units) selected from the biomedical engineering pathway as follows: three major field elective courses from Biomedical Engineering CM186, Electrical Engineering 14, 132A, 141, and 176 or Mechanical and Aerospace Engineering 105A; one capstone design course from Electrical Engineering 113D or 180D; and one laboratory course from Biomedical Engineering CM187 or Electrical Engineering M171L (or by petition from 194 or 199).

**For information on University and general education requirements, see the College and Schools section earlier in this catalog.**

**Electrical Engineering Lower Division Courses**

1. **Electrical Engineering Physics I.** (4) Lecture, three hours; discussion, one hour; outside study, eight hours. Requisites: Mathematics 32A, 32B, Physics 1A, 1B. Introduction to modern physics and electromagnetism with engineering orientation. Emphasis on mathematical tools necessary to express and solve Maxwell equations. Relation of these concepts to waves propagating in free space, including dielectrics and optical systems. Letter grading.

2. **Physics for Electrical Engineers.** (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisite: course 1. 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. **Introduction to Electrical Engineering.** (2) Lecture, two hours. Introduction to field of electrical engineering; research and applications across several areas, such as communications, control, electromagnetics, embedded computing, engineering optimization, integrated circuits, MEMS, nanotechnology, photonics and optoelectronics, plasma electronics, signal processing, and solid-state electronics. P/NP grading.

4. **Circuit Analysis I.** (4) Lecture, three hours; discussion, one hour; outside study, eight hours. Requisite: Physics 1B. Corequisite: Mathematics 33A. Intro-

M16. Logic Design of Digital Systems. (4) (Same as Computer Science M135A.) Lecture, four hours; discussion, two hours; 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 systems 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. Requisites: course 1 or Physics 1C, Mathematics 33A, 33B. 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.

101. Engineering Electromagnetics. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisites: course 1 or Physics 1C, Mathematics 32A and 33B or 32B and 33B. 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.


103. Applied Numerical Computing. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisite: Civil Engineering 15 or Computer Science 32A or 33A or 33B or 33C. Principles of numerical analysis and applications of AC and DC steady state analysis, AC steady state analysis, digital signal processing, AC steady state analysis, power networks, poles and zeros, frequency response, mutual inductance, ideal transformers, application of Laplace transforms to circuit analysis. Letter grading.

110. Circuit Analysis II. (4) Lecture, three hours; discussion, one hour; outside study, eight hours. Requisite: course 10. Corequisite: course 102. Sinusoidal excitation and phasors, AC steady state analysis, AC steady state analysis, 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 100 or 110. Experiments with basic circuits containing resistors, capacitors, inductors, and op-amp. Ohm’s law voltage and current division. Thevenin and Norton equivalent circuits, superposition, transient and steady state analysis, and frequency response properties. Letter grading.


113D. Digital Signal Processing Design. (4) Lecture, two hours; laboratory, four hours; outside study, six hours. Requisites: course 113 and Computer Science 113C. Real-time implementation of digital signal processing algorithms on digital processor chips. Experiments involving A/D and D/A conversion, aliasing, filtering, sinusoidal oscillators, Fourier series, and noise. 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 for communication, speech, audio, or video using DSP chip. Letter grading.

115A. Analog Electronic Circuits I. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisites: course 110. Review of physics and operation of diodes and bipolar and MOS transistors. Equivalent circuits and models of semiconductor devices. Analysis and design of single-stage amplifiers. DC biasing and operational amplifier analysis. Operational amplifier systems. Letter grading.


115BL. Analog Electronic Laboratory II. (4) Laboratory, four hours; outside study, eight hours. Enforced requisite: courses 115AL, 115B. Experimental and computer studies of multistage, wideband, tuned, and power amplifiers, and noise in amplifier circuits. Introduction to thick film hybrid techniques. Construction of amplifier using hybrid thick film techniques. Letter grading.

115C. Digital Electronic Circuits. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Enforced requisite: course 115A. Computer Science M51A. Recommended: course 115B. Transistor-level digital circuit design. Modern log- ic 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.


M115C. Computer Systems Architecture. (4) (Same as Computer Science 32) Lecture, four hours; discussion, two hours; outside study, six hours. Requisites: course M16 or Computer Science M51A, Computer Science 33. Recommended: course M16L or Computer Science M152A. Computer Science 111. Computer system organization and design, implementa- tion of CPU datapath and control, instruction set de- sign, memory hierarchy (caches, main memory, virtual memory) organization and management, input/output subsystems (bus structures, interrupts, DMA), perfor- mance evaluation, pipelined processors. Letter grading.

M116L. Introductory Digital Design Laboratory. (2) (Same as Computer Science M152A.) Laboratory, four hours; outside study, two hours. Requisite: course M16 or Computer Science M51A. Hands-on design, implementa- tion of digital circuit design. Use of computer-aided design tools for schematic capture and simulation, implementation of complex circuits using programmable array logic, design projects. Letter grading.

M117. Computer Networks: Physical Layer. (4) (Same as Computer Science M117T.) Lecture, two hours; discussion, two hours; laboratory, two hours; outside study, six hours. Not open to students with credit for course M117T. Introduction to fundamental computer communication concepts underlying and supporting modern networks, with focus on wireless energy levels in solids, and band layers of network protocol stack. Systems include wireless LANs (IEEE802.11) and ad hoc wireless and personal area networks (e.g., Bluetooth, ZigBee). Experimental labora- tory sessions included. 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 design of bipolar and MOS transistors, equivalent circuits, high-frequency behav- ior, voltage limitations. Letter grading.

122L. Semiconductor Devices Laboratory. (4) Lecture, four hours; laboratory, four hours; outside study, four hours. Enforced requisite: course 122. Not open to students with credit for course 122L. Design and fabrication of digital integrated circuits. Design and fabrication of CMOS integrated circuits. Letter grading.

123A. Fundamentals of Solid-State I. (4) Lecture, three hours; discussion, one hour; outside study, eight hours. Enforced requisite: course 123A. Introduction to fundamentals of solid-state physics, quantum mechanics, and quantum statistics applied to solid-state. Crystal structure, energy levels in solids, and band theory and semicon- ductor properties. Letter grading.

123B. Fundamentals of Solid-State II. (4) Lecture, three hours; outside study, nine hours. Enforced requisite: course 123A. Discussion of solid-state properties, lattice vibrations, thermal properties, magnetic, and superconducting properties. Letter grading.

124. Semiconductor Physical Electronics. (4) Lecture, three hours; discussion, one hour; outside study, eight hours. Enforced requisite: course 124A. Introduction to the structure of semiconductors, experimental probes of basic band structure parameters, statistics of carriers, carrier transport properties at low fields, excess carrier transport properties, quantum size effects, quantum mec- hanisms, heterojunction properties. Letter grading.

128. Principles of Nanoelectronics. (4) Lecture, four hours; discussion, four hours; outside study, four hours. Requisites: course 1, or Physics 1A and 1B. Introduction to fundamentals of nanoscience for elec- tronics nanosystems. Principles of fundamental quanti- ties: electron charge, effective mass, Bohr magneton, and coupling constants as well as device approaches. From these nanoscale components, discussion of basic be- haviors of nanosystems such as analysis of dynamics, variability, and noise, contrasted with those of scaled CMOS. Incorporation of design project in which stu- dents are challenged to design electronics nanosys- tems. Letter grading.

129D. Semiconductor Processing and Device De- sign. (4) Lecture, two hours; laboratory, four hours; outside study, six hours. Requisites: course 121B. Introduction to CAD tools used in integrated cir- cuit processing and device design. Device structure optimization tool is based on PISCES; process integra- tion tool is based on SUPREM. Course familiarizes students with those tools. Using CAD tools, CMOS process integration to be designed. Letter grading.

131A. Probability. (4) Lecture, four hours; discussion, one hour; outside study 10 hours. Requisites: course 102, Mathematics 32B, 33B. Introduction to basic con-
cepts of probability, including random variables and vectors, distributions and densities, moments, character-
teristic functions, and limit theorems. Applications include communication, control, and signal processing. Intro-
duction to computer simulation and generation of ran-
dom events. Letter grading.

131B. Introduction to Stochastic Processes. (4) Lecture, four hours; outside study, seven hours. Enforced requisites: course 131A. Introduction to concepts of stochastic processes, em-
phasing continuous- and discrete-time stationary processes, correlation function and spectral density, linear transformation, and mean-square estimation. Applications to communication, control, and signal pro-
cessing. Introduction to computer simulation and analy-
ysis of random processes. Letter grading.

132A. Introduction to Communication Systems. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Enforced requisites: courses 102, 113, 113A. Properties of signals and noise. Baseband and pulse and digital signaling. Bandpass signaling techni-
quies. Communication systems: digital transmission, frequency-division multiplexing and telephone sys-
tems, satellite communication systems. Performance of communication systems in presence of noise. Letter grading.

132B. Data Communications and Telecommunica-
tion Networks. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Enforced requisites: course 103. Telecommunication networks: telephone, data comm., Internet, cellular, local area networks, and wireless. Letter grading.

136. Introduction to Engineering Optimization Techniques. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Recommended: course 103. Mathematical models and computer simulation tools for solving engi-
neering and science students. Introduction to optimization techniques for engineering and science students. Minimization of unconstrained functions of various vari-
ables: steepest descent, Newton-Raphson, conjugate gradient, and quasi-Newton methods. Rates of conver-
gence. Methods for constrained minimization: introduc-

141. Principles of Feedback Control. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Enforced requisites: course 102. Mathematical models and computer simulation tools for solving engi-
neering and science students. Introduction to optimization techniques for engineering and science students. Minimization of unconstrained functions of various vari-
ables: steepest descent, Newton-Raphson, conjugate gradient, and quasi-Newton methods. Rates of conver-
gence. Methods for constrained minimization: introduc-

142. Linear Systems: State-Space Approach. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Enforced requisites: course 102. State-space methods of linear system analysis and synthesis, with application to problems in networks, control, and system modeling. Letter grading.

CM150. Introduction to Micromachining and Micro-
electromechanical Systems (MEMS). (4) (Same Biomedical Engineering CM150 and Mechanical and Aerospace Engineering CM180.) Lecture, four hours; discussion, one hour; outside study, seven hours. Recommended: Chemistry 20A, 20L, Physics 1A, 1B, 1C, 4AL, 4BL. Corequisite: course CM150L. Introduction to micromachining and microelectromechanical systems (MEMS). Methods of micromachining and how these methods can be used to produce variety of MEMS, including microstructures, microsensors, and microactuators. Students design microfabrication pro-
cesses and desired MEMS devices. Concurrently scheduled with course CM250A. Letter grading.

150DL. Photonic Sensor Design Laboratory. (4) Lecture, two hours; laboratory, four hours; outside study, seven hours. Recommended: seniors. Multidisciplinary course with lectures and laboratory experiments on optical sensors. Fundamentals of intensity and interfer-
ence-based transducers, polarimeters, multiplexing and sensor networks, physical and biomedical sen-
sor design and application of optical gyroscopes, computer interfacing, and signal processing. Letter grading.

CM150L. Introduction to Micromachining and Mi-
croelectromechanical Systems (MEMS) Laboratory. (4) (Same as Mechanical and Aerospace Engineering CM180L.) Lecture, one hour; laboratory, four hours; outside study, one hour. Required: Computer Science 20A, 20L, Physics 1A, 1B, 1C, 4AL. Corequisite: course CM150 Hands-on introduction to micromachining technologies and microelectromechanical systems (MEMS) laboratory. Methods of micromachining and how these methods can be used to produce variety of MEMS, including microstructures, microsensors, and microactuators. Students go through process of fabri-
cating MEMS device. Concurrently scheduled with course CM250L. Letter grading.

161. Electromagnetic Waves. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. En-
forced requisite: course 101. Time-varying fields and Maxwell equations, plane wave propagation and inter-
action with media, energy flow and Poynting vector, guided waves in waveguides, phase and group veloc-
ity, radiation and antennas. Letter grading.

162A. Wireless Communication: Digital Systems and Anten-
as. (4) Lecture, three hours; discussion, one hour; outside study, eight hours. Enforced requisite: course 101. Basic properties of transmitting and receiving an-
tennas, antenna arrays, and antenna synthesis. Adaptive arrays, Friis transmission formula, radar equations, Cell-site and mobile antennas, bandwidth budget. Noise in communication systems (transmission lines, antennas, atmospheric, etc.). Cell-site and mobile an-
tennas, cell coverage for signal and traffic, interfer-
ence, multipath fading, ray bending, and other propa-
gation phenomena. Letter grading.

163A. Introductory Microwave Circuits. (4) Lec-
ture, three hours; discussion, one hour; outside study, eight hours. Enforced requisite: course 101. Transmis-
sion lines description of waveguides, impedance trans-
formers, power dividers, directional couplers, filters, hy-
brid junctions, nonreciprocal devices. Letter grading.

163B. Microwave and Millimeter Wave Active De-
vices. (4) Lecture, three hours; discussion, one hour; outside study, eight hours. Enforced requisite: course 121B. MESFET, HEMT, HBT IMPATT, Gunn, small sig-
nal models, noise model, large signal model, loadpull method, parameter extraction technique. Letter grad-
ing.

163C. Active Microwave Circuits. (4) Lecture, three hours; outside study, nine hours. Enforced requisites: courses 115A, 161. Theory and design of microwave transistor amplifiers and oscillators; stability, noise, dis-
tortion. Letter grading.

164D. Microwave Wireless Design. (4) Lecture, one hour; laboratory, four hours; outside study, seven hours. Enforced requisite: course 161. Microwave inte-
grated circuit design from wireless system perspective, with focus on (1) use of microwave circuit simulation tools, (2) design of wireless frontend circuits including low noise amplifier, mixer, and power amplifier, (3) knowledge and skills required in wireless integrated circuit characterization and implementation. Letter grading.

164L. Microwave Wireless Laboratory. (2) One hour; laboratory, three hours; outside study, three hours. Enforced requisite: course 161. Measurement techniques and instrumentation for active and passive microwave components; cavity resonators, wave-
guides, wave meters, slotted lines, directional couplers. Design and fabrication of microwave circuits in microstrip and coaxial systems. Letter grading.

M171L. Data Communications Systems Laboratory. (2 to 4) (Same as Computer Science M171L) Labora-
tory, five to eight hours; outside study, two to four hours. Recommended preparation: course M118L. Limited to seniors. Interpretation of analog-signal asymptotic behavior of communication systems through experience in using contemporary test instru-
tments to generate and display signals in relevant labo-
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172. Laser Laboratory. (4) Laboratory, four hours; outside study, eight hours. Enforced requisite or coreq-
ishment: course 172. Programming, gain, mode structure. Laser applications, includ-
ing optics, modulation, communication, holography, and interferometry. Letter grading.

173. Photonic Devices. (4) Lecture, four hours; dis-
cussion, one hour; outside study, seven hours. En-
forced requisite: course 101. Introduction to basic prin-
ciples of photonic devices. Topics include crystal op-

173D. Photonics and Communication Design. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Enforced requisite: course 102. Recommended: course 132A. Introduction to measurement of basic photonic devices, including LEDs, lasers, detectors, and amplifiers, as well as the fundamental component of fiber systems. Modulation techniques, including A.M., F.M., phase and suppressed carrier methods. Letter grad-
ing.

174. Semiconductor Optoelectronics. (4) Lecture, four hours; discussion, one hour; outside study, eight hours. Enforced requisites: courses 102, 161. Two-dimensional linear systems. Fourier transform, optical interfer-
ometry. Analysis of optical imaging systems. Spa-
tial filtering and optical information processing. Wave-
form distortion, wavefront correction, and holography. Letter grading.

175. Lasers in Biomedical Engineering (2 to 4) Le-
tecture, three hours; discussion, one hour; outside study, eight hours. Enforced requisite: course 101. Study of different types of laser systems and their operation. Examination of their role in current and projected bio-
medical applications. Specific capabilities of laser radi-
ation to be related to each example. Letter grading.

180D. Systems Design. (4) Lecture, two hours; labo-
atory, two hours; outside study, eight hours. Limited to senior Electrical Engineering majors. Advanced sys-
tems design integrating communications, control, and signal processing subsystems. Different project to be assigned yearly in which student teams create high-
performance designs that manage trade-offs among sub-
systems. Letter grading.

181D. Robotic Systems Design. (4) Lecture, two hours; laboratory, four hours; outside study, six hours. Recommended: courses M140, 141L, 140 (Formerly Computer Science M152A), Computer Science 31, 33. Recom-
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require to 184DB. Courses centered on group project that runs year long to give students intensive experience in team-organized topics, microcontroller program- ming, and project coordination. Several projects based on autonomous robots that traverse small mazes and courses offered yearly and target regional competi- tions. Students receive suggestions that are incorpo- rated and approved by faculty members. Topics include sensing circuits and amplifier-based design, microcon- troller 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. Requi- site: course 101 or Physics 110A. Senior-level intro- duction covering fundamentals of ionized gases and applications to materials processing, generation of coherent radiation and particle beams, and renewable energy source. Letter grading.

188. Special Courses in Electrical Engineering. (4) Seminar, four hours; outside study, eight hours. Spe- cial topics in electrical engineering for undergraduate students taught on experimental or temporary basis, as needs arise. Topics are chosen and guided by visit- ing faculty members. May be repeated once for credit with topic or instructor change. Letter grading.

194. Research Group Seminars: Electrical Engi- neering. (1 to 3) Tutorial, to be arranged. Limited to juniors/sen- iors. Supervised individual research or investigation under guidance of faculty mentor. Culfminating paper or project required. May be repeated for credit with school approval. Individual course required; enrollment petitions available in Office of Academic and Stu- dents Affairs. Letter grading.

Graduate Courses

201A. VLSI Design Automation. (4) Lecture, four hours; outside study, eight hours. Requisite: course 115C. Fundamentals of design automation of VLSI cir- cuits and systems, including introduction to circuit and system platforms such as field programmable gate ar-rays and multicore systems; high-level synthesis, logic synthesis, and technology mapping; physical design; and testing and verification. Letter grading.

210C. Mathematics and Engineering. (4) Lecture, four hours. Requisite: course 115C. Detailed study of VLSI circuit and system modeling considering performance, signal integrity, power and thermal ef- fects, reliability and fault tolerance. Discussion of design principles of modeling and optimization codevelop- ment. Letter grading.

202A. Embedded Systems. (4) (Same as Comput- er Science M213A.) Lecture, four hours; outside study, eight hours. Designed for graduate computer science and electrical engineering students. Methodologies and technologies for design of embedded systems. Topics include hardware and software platforms for embedded systems, techniques for modeling and specification of system behavior, software organiza- tion, real-time operating system scheduling, real-time communication scheduling, low-power power b-attery and energy-aware system design, timing synchro- nization, fault tolerance and debugging, and tech- niques for hardware and software architecture optimi- zation. Theoretical foundations as well as practical design methods. Letter grading.

202B. Distributed Embedded Systems. (4) (Same as Computer Science M213B.) Lecture, four hours; outside study, eight hours. Requisites: course 132B or Computer Science 131. Designed for graduate computer science and electrical engineering students. Interdisciplinary course with fo- cus on state-of-the-art embedded systems conce- pts needed to realize systems such as wireless sen- sor and actuator networks for monitoring and control of physical world. Topics include network self-configura- tion with localization and timing synchronization; ener- gy-aware system design and operation; protocols for MAC, routing, transport, disruption tolerance; program- ming issues and models with language, OS, database, and network. Laboratory: design and implementation of network collaborative processing systems with emphasis on real-world applications. Letter grading.

202C. Networked Embedded Systems Design. (4) Lecture, four hours; laboratory, four hours; outside study, four hours. Designed for graduate computer sci- ence and electrical engineering students. Training in combination of networked embedded systems design combining embedded hardware platform, embedded operating system, and hardware/software interface. Essential graduate student background for research and industry career paths in wireless devices for appli- cations to new area of wireless health. Laboratory design modules and course projects based on state-of-art embedded hardware platform. Letter grading.

205A. Matrix Analysis for Scientists and Engi- neers. (4) Lecture, four hours; outside study, eight hours. Preparation: one undergraduate linear algebra course. Designed for first-year graduate students in all branches of engineering, science, and related disci- plines. Topics include vector spaces, linear transfor- mations, eigenvalues and eigenvectors, symmetric matrices, orthogonalization, singular value decomposi- tion, and positive definiteness. Applications to problems in signal processing, communications, and control. Letter grading.


209AS. Special Topics in Circuits and Embedded Systems. (4) Lecture, four hours; outside study, eight hours. Special topics in one or more aspects of circuits and embedded systems, such as digital, analog, mixed, and hybrid integrated circuits (RF ICs); electronic design automation; wireless commu- nication circuits and systems; embedded processor architectures; embedded software; distributed sensor and actuator systems; fault tolerance and debugging. May be repeated for credit with topic change. S/U or letter grading.

209BS. Seminar: Circuits and Embedded Systems. (2 to 4) Seminar, two to four hours; outside study, four to ten hours. Seminars are devoted to current and advanced topics in one or more aspects of circuits and embedded systems, such as digital, analog, mixed-signal, and radio frequency integrated circuits (RFICs); electronic design automation; wireless commu- nication circuits and systems; embedded processor architectures; embedded software; distributed sensor and actuator networks; robotics; and embedded secu- rity. May be repeated for credit with topic change. S/U grading.


212A. Theory and Design of Digital Filters. (4) Lec- ture, three hours; computer assignments, one hour; computer laboratory assignments. Letter grading.

212B. Multirate Systems and Filter Banks. (4) Lec- ture, three hours; outside study, eight hours. Requisite: course 212A. Fundamentals of multirate systems; polyphase representation; multistage implementations; applications of multirate systems; maximally decimat- ed filter banks; perfect reconstruction filter banks; pararnitary filter banks; wavelet transform and its rela- tion to multirate filter banks. Letter grading.

213A. Advanced Digital Signal Processing Circuit Design. (4) Lecture, three hours; outside study, nine hours. Requisite: course 212A. Digital filter design and optimization tools, architectures for digital signal pro- cessing circuits; integrated circuit modules for digital signal processing; programmable signal processors; CAD tools and cell libraries for application-specific in- tegrated circuit design; case studies of speech and im- age processing circuits. Letter grading.

214A. Digital Speech Processing. (4) (Same as Biomedical Engineering M214A.) Lecture, three hours; laboratory, two hours; outside study, seven hours. Requ- site: course 113. Theory and applications of digital processing of speech signals. Mathematical models of human speech production and perception mecha- nisms, speech analysis/synthesis. Techniques include linear prediction, filter-bank models, and homomorphic filtering. Applications to speech recognition, automatic recognition, and hearing aids. Letter grading.

214B. Advanced Topics in Speech Processing. (4) Lecture, three hours; computer assignments, two hours; outside study, seven hours. Requisite: course 214. Advanced techniques in speech pro- processing applications, with focus on speech recogni- tion by humans and machine. Physiology and psycho-

215A. Analog Integrated Circuit Design. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisite: course 115B. Analysis and design of analog integrated circuits. MOS and bipolar device structures and models, single-stage and differentia


215C. Analysis and Design of RF Circuits and Systems. (4) Lecture, four hours; outside study, eight hours. Requisite: course 215A. Principles of RF circuit and system design, with emphasis on monolithic imple

215D. Micro Wave Design. (4) Lecture, four hours; outside study, eight hours. Requisite: course 215A. Analysis and design of data conversion interfaces and filters. Sampling circuits and architectures, D/A conversion techniques, and D/A converter architectures, building blocks, precision techniques, discrete- and continuous-time filters. Letter grading.

215E. Signaling and Synchronization. (4) Lecture, four hours; discussion, eight hours. Requisites: courses 215A, 216A. Analysis and design of circuits for synchronization and communication for VLSI systems. Use of both digital and analog design techniques to improve data transfer between communication networks and systems. Letter grading.

216A. Design of VLSI Circuits and Systems. (4) (Same as Computer Science M258A.) Lecture, four hours; discussion, one hour; laboratory, four hours; outside study, three hours. Requisites: courses M16 or Computer Science M115A, and M115B. Requisite: course 115C. S/LVLSI circuit design and application in computer systems. Fundamental design techniques that can be used to implement complex integrated circuits 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 architect

216C. LSI in Computer System Design. (4) (Same as Computer Science M258C.) Lecture, four hours; laboratory, four hours; outside study, four hours. Requisite: course M216A. S/LVLSI design and application in computer systems. In-depth studies of VLSI architecture and VLSI design tools. Letter grading.

217. Biomedical Imaging. (4) (Same as Biomedical Engineering M217.) Lecture, three hours; outside study, nine hours. Requisite: course 114 or 211A. Optical imaging modalities in biomedicine. Other nonopti

218. Network Economics and Game Theory. (4) Lecture, four hours; outside study, eight hours. Discussion of how different cooperative and noncooperative games among agents can be constructed to model, analyze, optimize, and shape emerging interactions among users in different networks and system settings. How strategic agents can successfully compete with each other for limited and time-varying resources by optimizing their decision process and learning from their past interaction with other agents. To determine their optimal actions in these distributed, informational-world problems, optimal learning and model directly or implicitly other agents' responses to their actions. Discussion in detail of several existing multistage learning techniques that can be successfully deployed in different settings. Letter grading.

221A. Physics of Semiconductor Devices I. (4) Lecture, four hours; outside study, eight hours. Physi

221B. Physics of Semiconductor Devices II. (4) Lecture, four hours; outside study, eight hours. Princi

221C. Microwave Semiconductor Devices. (4) Lecture, four hours; outside study, eight hours. Physical princ

222. Integrated Circuits Fabrication Processes. (4) Lecture, four hours; outside study, eight hours. Requisite: course 221. Techniques to solve Boltzmann transport equa

223. Solid-State Electronics I. (4) Lecture, four hours; outside study, eight hours. Requisites: courses 224, 225. Energy band theory, electronic band structure of various elemental, compound, and alloy semi

224. Solid-State Electronics II. (4) Lecture, four hours; outside study, eight hours. Requisite: course 222. Techniques to solve Boltzmann transport equations, various scattering mechanisms in semiconduc

225. Physics of Semiconductor Nanostuctures and Devices. (4) Lecture, four hours; outside study, eight hours. Requisite: course 223. Theoretical methods for calculating electronic and optical properties of semiconductor structures. Quantum size effects and low-dimensional systems. Application to semiconduc

226. Microwave Semiconductor Devices. (4) Lecture, four hours; outside study, eight hours. Requisite: course 225. Introduction to microwave semiconductor devices, including negative resistance diodes, transistors, and detectors. Letter grading.


229S. Advanced Electrical Engineering Seminar. (2) Seminar, two hours; outside study, six hours. Preparation for successful completion of Ph.D. major field examination. Seminar on current research topics in solid-state and quantum electronics (Section 1) or in electronic circuit theory and applications (Section 2). Students report on tutorial and research topics in their dissertation area. May be repeated for credit. S/U grading.

230A. Estimation and Detection in Communication and Radar Engineering. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisite: course 131A. Estimation and detection concepts in communication and radar engineering; random signal and noise characteristics; signal detection and estimation in linear and nonlinear systems. Letter grading.

230B. Digital Communication Systems. (4) Lecture, four hours; outside study, eight hours. Requisites: courses 132A, 230A. Basic concepts of digital communication systems; representation of bandpass waveforms; signal space analysis and optimum receivers in Gaussian noise; comparison of digital modulation methods; synchronization and adaptive equalization; applications to modern communication systems. Letter grading.

230C. Algorithms and Processing in Communication and Radar. (4) Lecture, four hours; outside study, eight hours. Requisite: course 131A. Applications and implementations of digital signal processing algorithms in communication and radar systems. Optimum dynamic range scaling for random algorithms. Algorithms for fast conv

230D. Signal Processing in Communications. (4) Lecture, four hours; outside study, eight hours. Requisite: course 230C. Basic digital signal processing techn

231A. Information Theory. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisite: course 131A. Fundamentals of information theory and information theory for lossless data compression, channel capacity, rate ver

231B. 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.

232A. Stochastic Modeling with Applications to Telecommunication Systems. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisite: course 232B. Introduction to stoch

232B. Telecommunication Switching and Queueing Systems. (4) Lecture, four hours; outside study, eight hours. Requisite: course 232A. Random process modeling and analysis with applications to space-time digital switching systems and to integrated-service telecommunication systems. Fundamentals of traffic engineering and queueing systems. Queuing models: single, multiple, finite, and infinite server systems. Letter grading.

232C. Telecommunication Architecture and Networks. (4) Lecture, four hours; outside study, eight hours. Requisite: course 232B. Analysis and design of integrated-service telecommunication networks and multiple-access procedures. Stochastic analysis of priority-based queueing system models. Queueing netw

232D. Telecommunication Networks and Multiple-Access Communications. (4) Lecture, four hours; outside study, eight hours. Requisite: course 232C. Performance analysis and design of telecommunication networks and multiple-access communication systems. Topics include architectures, multiplexing and multiple-access, message delays, error/flow control, switching, routing, protocols. Applications to local-area, packet-radio, local-distribution, computer and satellite communication networks. Letter grading.

232E. Graphs and Network Flows. (4) Lecture, four hours; outside study, eight hours. Requisite: course 136. Solution to analysis and synthesis 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, transportation, and control systems. Letter grading.

233. Wireless Communications Systems. (4) Formerly numbered 233B.) Lecture, four hours; outside study, eight hours. Requisite: course 230B. Various aspects of physical layer and medium access design for wireless communications systems. Topics include wireless signal propagation and channel modeling, single carrier and spread spectrum modulation for wireless systems, diversity techniques, multiple-access schemes, design and effects of non-ideal components, hardware partitioning issues. Case study highlights system level trade-offs. Letter grading.


237. Dynamic Programming. (4) (Same as Mechanical and Aerospace Engineering M276.) Lecture, four hours; outside study, eight hours. Requisite: course 232A or 236A or 236B. Introduction to mathematical analysis of sequential decision processes. Finite horizon model in both deterministic and stochastic settings; convergence of finite horizon methods. Solution of large-scale discrete-time, finite-state Markov decision processes. Topics include: dynamic programming; discounting; optimal stopping; linear quadratic Gaussian systems; Markov decision processes. Letter grading.

238. Multimedia Communications and Processing. (4) Lecture, four hours; outside study, eight hours. Requisite: courses 113, 131A. Key concepts, principles, and algorithms of real-time multimedia communication and processing across heterogeneous Internet and wireless channels. Due to flexible and low-cost infrastructure, new networks and communication channels enable variety of delay-service multimedia transmission applications and provide varying resources with limited support for quality of service required by delay-sensitive, bandwidth-intensive, and loss-tolerant multimedia applications. New concepts, principles, theories, and practical solutions for cross-layer design that can provide optimal adaptation for time-varying channel characteristics, adaptive and delay-sensitive applications, and multiuser transmission environments. Letter grading.

239A5. Special Topics in Signals and Systems. (4) Lecture, four hours; outside study, eight hours. Special topics in control of signals and systems, such as communications, control, image processing, information theory, multimedia, computer networking, optimization, speech processing, telecommunications, and VLSI design. Topic to be repeated for credit with topic change. S/U or letter grading.

239B5. Seminar: Signals and Systems. (2 to 4) Seminar, two to four hours; outside study, four to eight hours. Letter grading.

239B5S. Seminar: Signals, Systems, and Controls. (2 to 4) Seminar, two to four hours; outside study, four to eight hours. Letter grading.

240B. Linear Optimal Control. (4) Lecture, four hours; outside study, eight hours. Requisites: courses 141, M240A. 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.

240C. Optimal Control. (4) (Same as Chemical Engineering M280C and Mechanical and Aerospace Engineering M278A.) Lecture, four hours; outside study, eight hours. Requisite: course 240B. Applications of variational methods, Pontryagin maximum principle, Hamilton-Jacobi-Bellman equation (dynamic programming). Stabilization design via state feedback and observer, separation principle. Control systems with limited support for quality of service required by delay-sensitive applications. Recent trends in feedback control of large-scale systems. Letter grading.


241C. Stochastic Control. (4) Lecture, four hours; outside study, eight hours. Requisite: course 241B. Linear quadratic Gaussian theory of optimal feedback control of stochastic systems; discrete-time state-space models; sigma algebra equivalence and separation principle. Compensator design for time invariant systems; feedback control and servomechanisms, extensions to nonlinear systems; applications to intersection guidance, gust alleviation. Letter grading.


243. Robust and Optimal Control by Convex Meth- ods. (4) Lecture, four hours; outside study, eight hours. Requisite: course M240A. Multivariable robust control, including H-infinity control theory, robust system design, and robust performance analysis. Emphasis on application of convex methods to analysis and design, in particular linear matrix inequality (LMI) approach. Letter grading.

248A5. Seminar: Systems, Dynamics, and Control Topics. (2) (Same as Chemical Engineering M297 and Mechanical and Aerospace Engineering M299A.) Seminar, two hours; outside study, six hours. Limited to graduate engineering students. Topics in system and control research by leading academic researchers from fields of systems, dynamics, and control. Students who work in these fields present their papers and results. S/U or letter grading.

CM250A. Introduction to Micromachining and Microelectromechanical Systems (MEMS). (4) (Same as Biomedical Engineering CM250A and Mechanical and Aerospace Engineering CM280A.) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisites: Chemistry 20A, 20L, Physics 1A, 1B, 1C, 4AL, 4BL. Corequisite: course CM250L. Introduction to micromachining technologies and microelectromechanical systems (MEMS). Methods of micromachining and how these methods can be used to produce variety of MEMS, including microstructures, microsensors, and microactuators. Students design microfabrication processes capable of producing desired MEMS device. Concurrently scheduled with course CM150. Letter grading.

CM250B. Microelectromechanical Systems (MEMS) Fabrication. (4) (Same as Biomedical Engineering CM250B and Mechanical and Aerospace Engineering CM280B.) Lecture, three hours; discussion, one hour; outside study, eight hours. Enforced prerequisite: course CM150 or CM250A. Advanced discussions of micromachining processes used to construct MEMS. Coverage of many lithographic, deposition, and etching processes, as well as their combination in process integration. Microfabrication issues such as chemical resistance, corrosion, mechanical properties, and residual/intrinsic stress. Letter grading.

CM250L. Introduction to Micromachining and Micro- electromechanical Systems (MEMS) Laboratory. (2) (Same as Biomedical Engineering CM250L and Mechanical and Aerospace Engineering CM280L.) Lecture, one hour; laboratory, four hours; outside study, eight hours. Requisite: Chemistry 20A, 20L, Physics 1A, 1B, 1C, 4AL, 4BL. Corequisite: course CM250A. Hands-on introduction to micromachining technologies and microelectromechanical systems (MEMS) laboratory. Students learn about how these methods can be used to produce variety of MEMS, including microstructures, microsensors, and microactuators. Students go through process of fabricating MEMS device. Concurrently scheduled with course CM150L. Letter grading.

CM252. Microelectromechanical Systems (MEMS) Device Physics and Design. (4) (Formerly numbered CM252B.) Lecture, four hours; laboratory, three hours; outside study, five hours. Requisites: Mathematics 32A, Physics 1B or 6B. Introduction to principles and technologies of bio-electricity and neural signal recording, processing, and stimulation. Topics include bioelectricity, electrophysiology (action potentials, local field potentials, EEG, ECOC), intracellular and extracellular recording, microelectrode technology, neural signal processing (neural signal frequency bands, filtering, spike detection, spike sorting, stimulus artifact rejection, brain-computer interfaces, deep-brain stimulation, and prosthetics. Letter grading.


CM257. Nanoscience and Technology. (4) (Same as Mechanical and Aerospace Engineering M257.) Lecture, four hours; outside study, eight hours. Enforced prerequisite: course CM250A. Introduction to fundamentals of nanoscale science and technology. Basic physical principles, quantum mechanics, chemical bonding and nanostructures, top-down and bottom-up (self-as


266. Computational Methods for Electromagnetics. (4) Lecture, four hours; outside study, eight hours. Requires: course 163A. Computational techniques for partial differential and integral equations: finite difference, finite element, method of moments. Applications include transmission lines, resonators, integrated circuits, solid-state device modeling, electromagnetic scattering, and antennas. Letter grading.

270. Applied Quantum Mechanics. (4) Lecture, four hours; outside study, eight hours. Preparation: modern physics (or course 123A), linear algebra, and ordinary differential equations. Principles of quantum mechanics for applications in lasers, solid-state physics, and nonlinear optics. Topics include eigenfunction expansion, uncertainty principle, the Schrödinger equation, quantum mechanics, dynamical systems, matrix methods, and quantum optics. Letter grading.


274. Fiber Optic System Design. (4) Lecture, three hours; outside study, nine hours. Requires: courses 172P, 271. Design, analysis, and application to physical layer design in fiber optic communication systems, including Telecom, Datacom, and CATV. Fundamentals of digital and analog optical communication systems, fiber transmission characteristics, and optical modulation techniques, including direct and external modulation and computer-aided design. Architectural-level design of fiber optic transceiver circuits, including preamplifier, amplifier, clock and data recovery, laser driver, and predistortion circuits. Letter grading.

279AS. Special Topics in Physical and Electronic Devices. (4) Lecture, four hours; outside study, eight hours. Requires: courses 172P and 172S. Special topics in physical and electronic devices, such as magnetism, microwave and millimeter wave devices, photonics and optoelectronics, plasma electronics, microelectronics, optoelectronic devices, and nanotechnology. May be repeated for credit with topic change. S/U grading.

279BS. Seminar: Physical and Electronic Devices. (2 to 4) Seminar, two to four hours; outside study, four to eight hours. Seminar on current and advanced topics in one or more aspects of physical and electronic devices, such as magnetism, microwave and millimeter wave devices, photonics and optoelectronics, plasma electronics, microelectronic and optoelectronic devices, plasma, and nanotechnology. Letter grading.


295. Academic Technical Writing for Electrical Engineers. (3) Seminar, three hours. Designed for electrical engineering students who have completed preliminary examinations. Students read models of good writing and learn to make rhetorical observations and writing decisions, improve their academic and technical writing skills by writing and revising conference and journal papers, and practice writing for and speaking to various audiences, including potential students, engineers outside their specific fields, and non-engineers (colleagues outside field, policymakers, etc.). Students write in variety of genres, all related to their professional development as electrical engineers. Emphasis on writing as vital way to communicate precise technical and professional information in distinct contexts, directly resulting in specific outcomes. S/U or letter grading.

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. Limit to graduated 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 graduated 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. M.S. Project Seminar. (4) Seminar, to be arranged. Required of all M.S. students not in thesis option. Supplied research experience individualized and guided to individual student 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.


595. Directed Individual or Tutorial Studies. (2 to 8) Tutorial, to be arranged. Limited to graduate electrical 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 M.S. Comprehensive Examination. (2 to 12) Tutorial, to be arranged. Limited to graduate electrical engineering students. Reading and preparation for M.S. comprehensive examination. S/U grading.

597B. Preparation for Ph.D. Preliminary Examinations. (2 to 16) Tutorial, to be arranged. Limited to graduate electrical engineering students. S/U grading.

597C. Preparation for Ph.D. 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 M.S. Thesis. (2 to 12) Tutorial, to be arranged. Limited to graduate electrical engineering students. Preparation for and research for M.S. candidates, including thesis prospectus. S/U grading.

Engineering Schoolwide Programs

Henry Samueli School of Engineering and Applied Science

UCLA
6426 Boelter Hall
Box 951601
Los Angeles, CA 90095-1601
(310) 825-9580
http://www.engineer.ucla.edu

Professors Emeriti
Allen B. Rosenstein, Ph.D.
Bonham Spence-Campbell, E.E.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate and Professional Programs, and are available at the Graduate Division website, http://www.gdnet.ucla.edu/gasaa/library/pgmrqintro.htm. 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 Samueli School of Engineering and Applied Science offers the Master of Engineering (M.Eng.) degree (through the Engineering Executive Program), Master of Science (M.S.) online degree in Engineering, and Engineer (Engr.) degree as schoolwide degrees. A certificate of specialization is available in all areas of specialization, except computer science.

Engineering

Lower Division Courses

M10A. Introduction to Complex Systems Science. (5) (Same as Human Complex Systems M10A.) Lecture, four hours; discussion, one hour; outside study, seven hours. Enforced prerequisites: Chemistry 20, and Electrical Engineering 1 or Physics 1C. Introduction to underlying science encompassing structure, properties, and functionality of complex systems. Discussion of basic concepts from physics and chemistry. Chemical, optical, and electronic properties, electron transport, structural stability, self-assembly, templated assembly and applications of various nanostructures such as quantum dots, nanoparticles, quantum wires, quantum wells and multilayers, carbon nanotubes. Letter grading.

102. Synthetic Biosystems and Nanosystems Design. (4) Lecture, four hours; outside study, eight hours. Requisites: M101. Introduction to current progress in engineering to integrate biosciences and nanosciences into synthetic systems, where biological components are reengineered and re Wired 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 develop biosystems and nanosystems for nontrivial task required. Letter grading.

103. Environmental Nanotechnology: Implications and Applications. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Enforced prerequisites: course M101. Introduction to potential implications of nanotechnology to environmental systems as well as potential technologies to environmental protection. Technical content includes 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 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 industry) and macro-level (government, international) economic and technological interplay as they relate to technology management. How individuals, firms, and governments impact successful commercialization of high technology products and services. Letter grading.

87. Introduction to Engineering Disciplines. (4) Lecture, four hours; discussion, four hours; outside study, four hours. Introduction to engineering as a professional opportunity for freshman students by exploring differences between engineering disciplines and functions engineers perform. Development of skills and techniques for academic excellence through team process. Investigation of national need 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 to be provided by organization for which students are doing internship. Students may be required to meet on a regular basis with instructor and provide periodic reports of their experience. May not be applied toward major requirements. Normally, only 4 units of internship are allowed. Individual contract with associate dean required. P/NP grading.

98. What Students Need to Know about Careers in Engineering. (2) Seminar, two hours. Introduction to skills and aptitudes that most engineers require in their careers and description of big picture of engineering careers. Integrative work to relate specific skills and techniques of engineering courses to real world of engineering and roadmap of extracurricular activity that strengthens skills needed to achieve good jobs and achieve career success. P/NP grading.

Upper Division Courses

M101. Principles of Nanoscience and Nanotechnology. (4) (Same as Materials Science M105.) Lecture, four hours; discussion, one hour; outside study, seven hours. Enforced prerequisites: Chemistry 20, and Electrical Engineering 1 or Physics 1C. Introduction to underlying science encompassing structure, properties, and functionality of nanoscale systems. New phenomena that emerge in very small systems (typically with feature sizes below few hundred nanometers) explained using basic concepts from physics and chemistry. Chemical, optical, and electronic properties, electron transport, structural stability, self-assembly, templated assembly and applications of various nanostructures such as quantum dots, nanoparticles, quantum wires, quantum wells and multilayers, carbon nanotubes. Letter grading.

112. Laboratory to Market, Entrepreneurship for Engineers. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Critical components of entrepreneurship: finance, marketing, human resource, and accounting disciplines as they impact management of technology commercialization. Topics include intellectual property management, team building, market forecasting, and entrepreneurial finance. Students work in small teams studying technology management plans to bring new technologies to market. Students select from set of available technology concepts, many generated at UCLA, that are in need of plans for movement from laboratory to market. Letter grading.

113. Product Strategy. (4) Lecture, four hours; outside study, eight hours. Designed for juniors/seniors. 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; product portfolio management. Case studies, class projects, group discussions, and guest lectures by speakers from industry. Letter grading.

180. Engineering of Complex Systems. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Designed for juniors/seniors. Holistic view of engineering discipline, covering lifecycle 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 communication, sensor, and processing systems 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 reinforce lifelong learning habits. Letter grading.

183EW. Art of Engineering Endeavors. (4) (Formerly numbered 183.) Lecture, four hours; discussion, three hours; outside study, five hours. Limited to sophomore/junior/senior engineering students. Professional and ethical considerations in practice of engineering. Impact of technology on society and on development of moral and ethical values. Exploring practical and ethical implications of engineering, legal, biological, and other issues created by new technologies. Emphasis on research and writing within engineering environments. Writing and revision of about 120 pages total, including research essays and one team-written research report. Readings address technical issues and writing forms. Satisfies engineering writing requirement. Letter grading.

185EW. Art of Engineering Endeavors. (4) (Formerly numbered 185.) Lecture, four hours; discussion, three hours; outside study, five hours. Designed for juniors/senior engineering students. Nontechnical 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 engineering, computer sciences, and technology relate 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.

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 visiting faculty or in special visiting faculty courses. May be repeated for credit with topic or instructor change. Letter grading.
Graduate Courses

200. Program Management Principles for Engineers and Professionals. (4) Lecture, four hours; outside study, eight hours. Designed for graduate students in engineering process courses. Coverage of key elements: systems requirements and flow down, product development cycle, functional analysis, system synthesis and trade studies, budget allocations, risk management metrics, review and audit activities and documentation. Letter grading.

201. Systems Engineering. (4) Lecture, four hours; outside study, eight hours. Designed for graduate students. Practical review of major elements of system engineering process. Coverage of key elements: system requirements and flow down, product development cycle, functional analysis, system synthesis and trade studies, budget allocations, risk management metrics, review and audit activities and documentation. Letter grading.

202. Reliability, Maintainability, and Supportability. (4) Lecture, four hours; outside study, eight hours. Requisite: course 201. Designed for graduate students with 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 interactions using probabilistic theory. Topics also include fault detections and isolations and parts obsolescence. 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. Requisite: course 201. Designed for graduate students with B.S. degrees in engineering or science and one to two years of work experience in a selected domain. Art and science of architectural introduction to architectural methodology — paradigm and tools. Principles of architecting through analysis of architecture designs of major existing systems. Discussion of selected elements of architectural practices, such as representations models, design processes, and architecture frameworks. Examination of professionalization of system architecture. Letter grading.

215. Entrepreneurship for Engineers. (4) Formerly numbered 210.) Lecture, four hours. Limited to graduate engineering students. Topics in starting and developing high-tech 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. Prepa- ration: completion of minimum of four 200-level courses in online M.S. program. Project course that satisfies UCLA final comprehensive examination requirement of M.S. degree in Engineering. Project is complet- ed under individual guidance from UCLA Engineering faculty member and incorporates advanced knowledge learned in M.S. program of study. Letter grading.

375. Teaching Apprentice Practicum. (1 to 4) Semi- nar, to be arranged. Preparation: apprentice personnel environment and course, 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.


471A-471B. Engineer in General Environment. (3-3-1.5) Lecture, three hours (courses 471A, 471B, 471C) and 90 minutes (course 471C). Limited to Engi- neering Executive Program students. Influences of hu- man relations, laws, social sciences, humanities, and fine arts on development and utilization of natural and human resources. Interaction of technology and soci- ety past, present, and future. Change agents and substi- tution to S/U or letter (471A) grading; In Progress (471B) and S/U or letter (471C) grading.

472A-472D. Engineer in Business Environment. (3-3-1.5) Lecture, eight hours (courses 472A, 472B, 472C) and 90 minutes (course 472D). Limited to Engi- neering Executive Program students. Language of business for engineering executive. Accounting, fi- nance, business economics, business law, and mar- keting. Laboratory in organization and management problem solving. Analysis of actual business problems of firm, community, and nation, provided through coop- eration and participation with California business cor- porations 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 Systems. (2-2-1) Lecture, two and one-half 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) Formerly numbered 495B.) Seminar, four hours; out- side study, eight hours. Preparatory: appointment as teaching assistant. Limited to graduate engineering students. Seminar on communication of engineering principles, concepts, and methods, preparation, organ- ization of material, presentation, use of visual aids, grading, advising, and rapport with students. S/U grad- ing.

495B. Supervised Teaching Preparation. (2) (Same as English Composition M495E.) Seminar, two hours. Required of all teaching assistants for Engineer- ing writing courses not exempt by appropriate depart- mental or program training. Training and mentoring, with focus on composition pedagogy, assessment of student writing, guidance of revision process, and spe- cialized writing problems that may occur in engineering writing contexts. Practical concerns of preparing stu- dents to write course assignments, marking and grad- ing essays, and conducting peer reviews and confer- ences. S/U grading.

495C. Supervised Teaching Preparation. (2) (Same as English Composition M495F.) Seminar, one hour. Requisite: course M495B. Required of all teaching assistants in their initial term of teaching Engineer- ing writing courses. Mentoring in group and individ- ual meetings. Continued focus on composition pedagogy, assessment of student writing, guidance of revision process, and specialized writing problems that may oc- cur in engineering writing contexts. Practical concerns of preparing students to write course assignments, marking and grading essays, and conducting peer reviews and confer- ences. S/U grading.

S01. Cooperative Program. (2 to 6) Tutorial, to be ar- ranged. Preparation: consent of UCLA graduate advis- or and graduate dean, and host campus instructor, de- partment chair, and graduate dean. Used to record en- rollment of UCLA students in courses taken under cooperative arrangements with USC. S/U grading.
English can provide excellent preparation, including law, administration, business, teaching, media, and entertainment.

Within the B.A. 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 Ph.D. degree. Because the Ph.D. 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.

The Bachelor of Arts degree in English has an interdisciplinary dimension. Students may elect a concentration in creative writing workshops in a single genre. The creative writing concentration consists of three requirements as the major, with the exception that one breadth course must be taken from the creative writing area (English 136, 137, 138), and both electives must be creative writing workshops (courses 136, 137, 138).

Students who 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 section of this catalog.
than three workshops in any one creative writing genre. Students planning to select this program should contact the departmental counselor for further details.

American Literature and Culture B.A.

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 English critical reading and writing course, one year of English literature survey courses, and two years of one foreign language or a combination of foreign language and foreign literature courses.

Refer to the UCLA Transfer Admission Guide at http://www.admissions.ucla.edu/prospect/adm_tr.htm for up-to-date information regarding transfer selection for admission.

The Major

Required: Ten 4- or 5-unit upper division courses, including five in American literature selected from English 166A through 167B, 170A, 170B, 170C, 172C through 177, two of which must be devoted to literature written before 1900 (courses 166A through 167B, 170A, and M104A, 175, 176, 177 when treating a pre-1900 topic); one seminar from 183A, 183B, 183C, 191A, 191B, 191C, or when treating American topics, 180, 181A, 181B, 182E, 182F, M101D, M101F; two American race, ethnicity, gender, and sexuality courses from M102A, M102B, M104A through 106 (also 100, M101B, M101C, M101D, 103, M107A, M107B, 108, 109 when treating American topics or figures); and two courses from 100 through 199 or from courses pertaining to American culture offered by other departments (of those courses applied toward the major from outside the Department of English, both must usually come from one department or program and appear on a list of approved courses for the major). Each course applied toward requirements for the major must be at least 4 units and be taken for a letter grade.

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 English 120 or 121 (may fulfill one of three required breadth courses) no later than Winter Quarter of the junior year and one seminar from the English M180 through 191E sequence, preferably before the senior year. Students in the creative writing concentration are required to have completed one 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, 149 Humanities Building, (310) 825-1389. This allows them priority enrollment in many upper division courses.

Required Lower Division Courses (10 units): English 10B and 10C, with grades of C or better.

Required Upper Division Courses (25 units): Five courses selected from English 100 through M191E, including one course in literatures in English written before 1700 (see course lists 1a and 1b under English B.A., The Major, above) and one other course in literatures in English written before 1850 (see course lists 1a, 1b, and 1c under English B.A., The Major, above). A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major or minor requirements in another department or program.

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 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.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://www.gdnit.ucla.edu/gasa/college/pgmintro.htm. 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 (M.A.), Candidate in Philosophy (C.Phil.), and Doctor of Philosophy (Ph.D.) 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 four papers (three to five pages each) and two in-class essays. Satisfies Writing II requirement. Letter grading.

4W. Critical Reading and Writing. (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 four papers (three to five pages each) and two in-class essays. Satisfies Writing II requirement. Letter grading.

4WS. Critical Reading and Writing (Service Learning). (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 six papers, with minimum of 15 to 20 pages of revised writing. Service learning component includes minimum of 20 hours service with agency involved in issues of public advocacy and social justice. Satisfies Writing II requirement. Letter grading.

10A. Literatures in English to 1700. (5) Lecture, three hours; discussion, one hour. Enforced requisites: 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 requisites: English Composition 3 or 3H, English 4W or 4HW, 10A. 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 requisites: 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.
20. Introduction to Creative Writing. (4) Lecture, four hours. Preparation: submission of creative or expository writing to course coordinating committee. Enforced requisites: satisfaction of Entry-Level Writing requirement, English Composition 3 or 3H. Designed to introduce fundamentals of creative writing. Emphasis either on nonfiction or drama, depending on wishes of instructor(s) during any given term. Readings from assigned texts and weekly writing assignments required. P/NP or letter grading.

M40. Structure of English Words. (5) Same as Linguistics M101. Lecture, four hours; discussion, one hour. Introduction to structure of English words of classical origin, including most common base forms and rules by which alternate forms are derived. Students may expect to achieve substantial enunciation of their vocabulary while learning about etymology, semantic change, and abstract rules of English word formation. P/NP or letter grading.

M50. Introduction to Visual Culture. (5) Same as Film and Television M50. Lecture, three hours; discussion, one hour; laboratory, two hours. Enforced requisite: satisfaction of Entry-Level Writing requirement. Study of how visual media, including Adyg, Bing, still and moving images, and narrative films, influence contemporary aesthetics, politics, and knowledge. P/NP or letter grading.

80. Major American Authors. (5) Lecture, three hours; discussion, one hour. Enforced requisite: satisfaction of Entry-Level Writing requirement. Not open for credit to English majors or students with credit for any course in 170 series. Introduction to chief American authors, with emphasis on poetry, narrative prose, and short fiction of such writers as Poe, Dickinson, Emerson, Whitman, T. S. Eliot, and Hemingway. P/NP or letter grading.


Lower Division Seminars: Special Topics in English. (5 each) Seminar, three hours. Limited to 15 students. Content varies; see department counselor for information. Enforced requisite: English Composition 3 or 3H. Topics include: Romantic Literature; American Literature; African American Literature; Contemporary American Fiction; Modern and Contemporary Poetry; Post-Civil Rights Literature; American Texts in World Contexts; Women's Literature; Science Fiction; African American Writers of the 20th Century; African American Women Writers; American Women Writers of the 20th Century; Shakespeare, the Modern Mind; and Black Writing in the 20th Century. P/NP or letter grading.

88A-88Z. Upper Division Courses

91B. Introduction to Drama. (5) Formerly numbered 95B. 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; student project issues may include dramatic form, special uses of language in drama, methods of evaluation. P/NP or letter grading.

91C. Introduction to Fiction. (5) Formerly numbered 95C. 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, realistic and nonrealistic forms. P/NP or letter grading.

97H. Honors Seminar for Freshmen and Sopho- more. (4) Seminar, three hours. Enforced requisite: English Composition 3 or 3H. English 4W or 4WH. Required of limited to 15 students. Recommended for lower division students who anticipate entering English honors program during their junior year. Content varies; see departmental counselor for information. P/NP or letter grading.

Upper Division Courses

100. Introduction to Ethnic Studies. (5) Not the same as course 100 prior to Fall Quarter 2011. Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Introduction to academic study of race and ethnicity, with primary focus on literature. Through examination of institutions that form understanding of race—citizenship, nationalism, class, gender, and labor—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 rather highlights creation of ethnic categories and their effects on cultural production. P/NP or letter grading.

M101A. Premodern Queer Literatures and Cultures. (5). Not the same as course M101A prior to Fall Quarter 2011.) (Same as Lesbian, Gay, Bisexual, and Transgender Studies M101A and Women's Studies M105A.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Survey of discrete period of queer literature from beginning to circa 1850. Works by such writers as Sarah Moore, Patricia Morrisson, 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. (Formerly numbered M101A.) (Same as Lesbian, Gay, Bisexual, and Transgender Studies M101B and Women's Studies M105B.) 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, 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) Formerly numbered M101B. Lecture, three hours; discussion, one hour. Enforced requisite: satisfaction of Entry-Level Writing requirement. Recommended for instructional credential candidates and for students interested in issues (race, gender, language, cultural identity and form and structure) and aesthetic issues, including evaluative criteria, followed by close critical analysis of selection of representative poems. P/NP or letter grading.

M101D. Studies in Queer Literatures and Cultures. (5) Formerly numbered M101C. (Same as Lesbian, Gay, Bisexual, and Transgender Studies M101D and Women's Studies M105D.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Variable specialized study in queer literatures and cultures, with an emphasis on 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.

M102A. Historical Survey of Asian American Liter- ature. (5) (Same as Asian American Studies M112A.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Survey of Asian American literature either produced for orThematically reflecting pre-1980 period. Issues include immigration, diaspora, generational conflict, appropriations of cultural traditions, ethnicgender formation, interethnic dynamics, and social movement. Works by such authors as Edith Eaton, Younghee Kang, Carlos Bulosan, Hisaye Yamamoto, John Okada, Maxine Hong Kingston. P/NP or letter grading.

M102B. Contemporary Asian American Litera- ture and Criticism. (5) Not same as course M102B prior to Fall Quarter 2011.) (Same as Asian American Studies M112B.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Survey of post-1980 Asian American literature that explores key literary and critical issues, such as racialized experiences and activism, cultural work and immigrant labor, kinship and sexuality, minority and Orientalism, and methodology. May be repeated for credit with topic or instructor change. P/NP or letter grading.

103. Jewish Literature. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Study of literature of Jewish writers in and beyond America, with a focus on encounter of Jewish ethical ideals and social values with contemporary environment. P/NP or letter grading.

M104A. Early African American Literature. (5) (Same as Afro-American Studies M104A.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Introductory survey of African American literature from 18th century through World War I, including oral and written forms (ballads, spiritual, songs, prose, 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 Afro-American Studies M104B.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Introductory survey of 20th-century African American literature from New Negro Movement of post-World War I period to 1960s, including oral materials (ballads, blues, speeches and fiction, poetry, and essays by authors such as Jean Toomer, Claude McKay, Langston Hughes, Nella Larsen, E. Zora Neale Hurston, Richard Wright, Ann Petry, James Baldwin, Gwendolyn Brooks, and Ralph Ellison. P/NP or letter grading.

M104C. African American Literature of 1960s and 1970s. (5) (Same as Afro-American Studies M104C.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Introductory survey of African American literary expression from late 1950s through 1970s. Topics include the rise of Black Power movement of 1960s and emergence of black women's writing in early 1970s, with focus on authors such as Lorraine Hansberry, Amiri Baraka, Nikki Giovanni, Alice Walker, Toni Morrison, Issac Ruel, Audre Lorde, and Marshall, and Ernest Gaines. P/NP or letter grading.
M104D. Contemporary African American Literature. (5) (Same as Afro-American Studies M104D.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Introductory survey of African American literature from 1980s to present covering range of genres, with emphasis on diversity of perspectives and voices that have emerged over past 30 years or so. Authors may include Toni Morrison, August Wilson, Octavia Butler, Anna Deavere Smith, June Jordan, Charles Johnson, and Rita Dove. P/NP or letter grading. 

M104E. Topics in African American Literature and Culture. (5) (Same as Afro-American Studies M104E.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Lecture course provides opportunity to cover African American literature from wide range of theoretical, historical, format, and thematic perspectives. Topics may include African American autobiography, 20th-century African American literature and film, black diaspora literature, postmodern African American fiction, Afro-Futurism, and African Americanastic fiction. May be repeated for credit with topic or instructor change. P/NP or letter grading.

M105A. Early Chicana/Chicana 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 Chicana/Chicana literature from poetry of Triple Alliance and Aztec Empire through end of Mexican Revolution (1920), including oral tradition (poetry, corridos, testimonios, folklore, novels, short stories, and drama) by writers such as Nezahualcoyotl (Hungry Coyote), Cabaza de Vaca, María Amparo Ruiz de Burton, Eusebio Chacón, Daniel Venegas, and Lorena Villegas de Mañón. P/NP or letter grading.

M105B. Chicana/Chicana Literature from Mexican Revolution to El Movimiento, 1920 to 1970s. (5) (Not same as course M105B prior to Fall Quarter 2011.) (Same as Chicana and Chicano Studies M105B.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Survey of Chicana/Chicana literature from 1920s through Great Depression and World War II, ending with Chicana/Chicana civil rights movement. Oral and written narratives by writers including Conrado Espinoza, Jovita González, Chefas Jaramillo, Angelico Chávez, Mario Suárez, Oscar Acosta, and Evangelina Vigil. P/NP or letter grading.

M105C. Chicana/Chicana Literature since El Movimiento, 1970s to present. (5) (Formerly numbered M105C.) (Same as Chicana and Chicano Studies M105C.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Survey of Chicana/Chicana literature since 1970s, with particular emphasis on how queer and feminist activism as well as Central and South American migration have shaped 21st-century Chicana/o, Latina/o, gay, lesbian, queer, and feminist Chicana/o cultures. Oral, written, and graphic narratives of poetry, and drama by writers including John Rechy, Gloria Anzaldúa, Los Broz Hernández, Ana Castillo, and Dagoberto Gilb guide exploration of queer and feminist Chicana/o, Reagonista, immigration, immigration, and emerging Latina/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 origin. Representative works read in relation to such topics as relationship between Latina/Latina populations and U.S. cultural sphere, struggle for self-determination, experiences of exile and migration, border zones, enclaves and language, mes-tizaje and its impact on cultural production. P/NP or letter grading.

M105E. Studies in Chicana/Chicana and/or Latina/Latino 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/Latino literature. Topics include border, immigration, revolution, language, gender, and sexualities of diaspora, among others. May be repeated for credit with topic or instructor change. P/NP or letter grading.

106. Studies in Native American and Indigenous Literatures. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Survey of Native American and/or transnational indigenous literary and cultural expressions. 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) (Formerly numbered M107C.) (Same as Women's 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, or thematic emphases, with possible topics such as authorship, self-writings, 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 Women's Studies M107B) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Examination of literary and cultural production through lens of gender and sexuality. 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.

109. Topics in Race, Ethnicity, Gender, and Sexualitity Studies. (5) (Not same as course 109 prior to Fall Quarter 2011) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Study of literary, cultural, and/or cinematic texts produced by people from different ethnic and religious backgrounds and providing comparative cultural perspectives on living in multilingual societies. May be repeated for credit with topic or instructor change. P/NP or letter grading.

110. Interracial Encounters. (5) (Formerly numbered 178BS.) Lecture, four hours; discussion, one hour (when scheduled). P/NP or letter grading.

111A. Topics in Biblical Literature. (5) (Formerly numbered 108BC.) 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. May be repeated for credit with topic or instructor change. P/NP or letter grading.

112A. Oral Tradition. (5) (Formerly numbered 111A.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Study of myth, dramatic origins, oral epic, folktale, song, and story. P/NP or letter grading.

112B. Celtic Mythology. (5) (Formerly numbered 111D.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Celtic traditions of modern Ireland, Scotland, and other Celtic countries, with attention to colonial and postcolonial issues and folkloristic methods. P/NP or letter grading.

113A. History of English Language. (5) (Formerly numbered 121.) Lecture, four hours; discussion, 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) (Formerly numbered 111E.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Knowledge of Irish or Welsh is helpful. General course dealing with Celtic literature from earliest times to 14th century. P/NP or letter grading.

112D. Celtic Folklore. (5) (Formerly numbered 111F.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Folkloric traditions of modern Ireland, Scotland, and other Celtic countries, with attention to oral and written forms. May be repeated for credit with topic or instructor change. P/NP or letter grading.

113B. Introduction to Structure of Present-Day English. (5) (Formerly numbered 122.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Introduction to techniques of linguistic description as applied to pronunciation, vocabulary, and parts of speech. P/NP or letter grading.

114. Lyric Histories. (5) (Not same as course 114 prior to Fall Quarter 2011.) Lecture, four hours; discussion, 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 concepts 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 18th-century beginnings to contemporary novels. Emphasis on social and cultural aspects of literature. P/NP or letter grading.

115C. Literature for Children and Adolescents. (5) (Formerly numbered 111C.) 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 school grades. P/NP or letter grading.

115D. Detective Fiction. (5) (Formerly numbered 117.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Study of detective fiction and topics in literary and critical theory. P/NP or letter grading.

115E. Science Fiction. (5) (Formerly numbered 116.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Study of science fiction and speculative literature. 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 hyperfiction, hypertexts, critical theory, and interpretation. Topics may include Marxian, structuralism, poststructuralism, and theories of narrative, and may not be repeated for credit. 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. Study of electronic literature in English dealing with exploration, settlement, and emergent cultural awareness of Western U.S. P/NP or letter grading.

118A. Interdisciplinary Studies in Literature. (5) (Formerly numbered 109.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Study of literature in English in relation to other disciplines such as sciences, history, politics, philosophy, music, photography, visual studies, psychology. May be repeated for credit with topic or instructor change. P/NP or letter grading.

118B. Literary Theory. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Investigation of relationship to literature to other more or other arts, including musical theory, popular music, jazz, painting, photography, other visual arts, 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.

118C. Studies in Visual Culture. (5) (Formerly numbered 118.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Study of visual images (photography, film, video) and their relation to literary and/or popular culture. Topics include adaptation, visual analysis, word and image, image and culture, film and visual culture. May be repeated for credit with topic or instructor change. P/NP or letter grading.

119. Literary Cities. (5) (Not same as course 119 prior to Fall Quarter 2011.) 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 PPNP 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, tourism, and migration in making of cities. May be repeated for credit with topic or instructor change. P/NP or letter grading.

120. History of Aesthetics and Critical Theory. (5) (Formerly numbered 140A.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: courses 10A, 10B, 10C. Investigation of texts and ideas in history of aesthetics, critical theory, and interpretation from Greeks through 18th century. Readings may include Greek philosophers, Biblical hermeneutics, Hume, Descartes, Kant, Schiller, and Hegel. May not be repeated for credit. P/NP or letter grading.

121. Modern and Contemporany Aesthetics and Critical Theory. (5) (Not same as course 121 prior to Fall Quarter 2011.) 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 Marxian, psychanalyses, structuralism, poststructuralism, and theories of narrative, and may not be repeated for credit. P/NP or letter grading.

122. Keywords in Theory. (5) (Not same as course 122 prior to Fall Quarter 2011.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: 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 key words, that have developed in the intellectual disciplines to shape literary and cultural studies. Consideration of lexical development of such keywords; how they alter and enrich assumptions about textuality, readers, and authority. Enforced requisite: courses 10A, 10B, 10C. Recommended: courses 10A, 10B, 10C. Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: courses 10A, 10B, 10C. P/NP or letter grading.

123. Theories of History and Historicism. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: courses 10A, 10B, 10C. Recommended: courses 120, 121. Exploration of theories of history and historicist approaches to literary texts. Investigation of how theorists negotiate between abstract concepts of history and situated historical narratives, how histories are constructed, troped, and given authority, how histories constitute past and present in relationship to each other to stabilize tradition or induce change, and complex ways that literary texts operate within and on their historical contexts. 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 requisite: 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 anthropology, philosophy, 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. Study of violence in literary, philosophical, religious, and psychological texts. How literature justifies that theorization of political 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 anthropology, philosophy, and critical theory. May be repeated for credit with topic or instructor change. P/NP or letter grading.

126. Feminist and Queer Theory. (5) (Same as Lesbian, Gay, Bisexual, and Transgender Studies M126.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Recommended: courses 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. Emphasis may be 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 requisite: courses 10A, 10B, 10C. Recommended: courses 120, 121. Examination of concepts and modes of performance, culture, and media, broadly construed. Evaluation of different modes of inquiry are demanded in advanced courses, as well as their interaction, 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 Theory. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: courses 10A, 10B, 10C. Recommended: courses 120, 121, 130, 131. Enforced requisite: courses 10A, 10B, 10C. Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: courses 10A, 10B, 10C. May not 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 requisite: courses 10A, 10B, 10C. May not 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 requisite: courses 10A, 10B, 10C. May not be repeated for credit with topic or instructor change. P/NP or letter grading.

131. Studies in Postcolonial Literatures. (5) (Formerly numbered 169B.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: course 10A, 10B, 10C. May not 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 requisite: courses 10A, 10B, 10C. May not be repeated for credit with topic or instructor change. P/NP or letter grading.

133. Transatlantic Literatures and Cultures. (5) (Formerly numbered 133 prior to Fall Quarter 2011.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: courses 10A, 10B, 10C. May not be repeated for credit with topic or instructor change. P/NP or letter grading.
Nationalism and Transnationalism. (5) Not same as course 134 prior to Fall Quarter 2011.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B, 10C. Examination of how critical frameworks of nation and migration, transnationalism and globalization, and traditional nationalist and postcolonial analysis of literary works, especially American, consider the particular relationship between literature and national identity. Other topics include nation building in relationship to regional identities as well as discourses 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.

Literature of America. (5) Not same as course 135 prior to Fall Quarter 2011.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B. Survey of literatures of Americans, with emphasis on complex ways in which letters of North America, Central America, South America, and Caribbean forge distinctly American perspectives on global affairs. Spans literature from age of encounter to 19th-century U.S. American revolution and Latin American independence movements and beyond. Explores topics as empire, colonialism, slavery, transnational dynamics, and cross-cultural transformations among indigenous, European, and African civilizations. May be repeated for credit with topic or instructor change. P/NP or letter grading.

Creative Writing: Poetry. (5) (Formerly numbered 133.) Seminar, three or four hours. Enrolled students of English Composition 3 or 3H, English 4W or 4HW are allowed to enroll 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.

Creative Writing: Short Story. (5) (Formerly numbered 134.) Seminar, three or four hours. Enrolled students of English Composition 3 or 3H, English 4W or 4HW. Three average-length stories to be completed each term. Some stories may, with instructor’s consent, be substantial revisions of other stories presented. Classroom discussion based on stories presented. 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.

Creative Writing: Screenplay. (5) Seminar, three hours. Enrolled students: English Composition 3 or 3H, English 4W or 4HW. Introductory workshop in writing of screenplays, with practice in writing of personal screenplays. Readings to be in screenplay form and theory as well as published screenplays. Weekly writing assignments, student critiques, and experiments in performance. Students expected to complete one full treatment and first 10 pages of one feature. 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.

Individual Authors. (5) (Formerly numbered 110.) Lecture, four hours; discussion, one hour (when scheduled). Enrolled students: English Composition 3 or 3H. Specialized study of work of one single poet, dramatist, prose writer, or novelist. May be repeated for credit with topic or instructor change. P/NP or letter grading.

Chaucer: Canterbury Tales. (5) (Formerly numbered 141A.) Lecture, four hours; discussion, one hour (when scheduled). Enrolled requisites: courses 10A, 10B. Intensive study of Chaucer’s works, including Canterbury Tales. May be repeated for credit with topic or instructor change. P/NP or letter grading.

Chaucer: Troilus and Criseyde and Selected Minor Works. (5) (Formerly numbered 141B.) Lecture, four hours; discussion, one hour (when scheduled). Enrolled 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.

Early Medieval Literature. (5) (Formerly numbered 150A.) Lecture, four hours; discussion, one hour (when scheduled). Enrolled requisites: courses 10A, 10B. Major poetry and prose of early medieval Britain, including animal epic, secular works, knights’ lives, and travel literature. Texts and topics include Beowulf, Vikings, poems on women, Bede, and King Alfred. P/NP or letter grading.

Later Medieval Literature. (5) (Formerly numbered 150B.) Lecture, four hours; discussion, one hour (when scheduled). Enrolled requisites: courses 10A, 10B. Reading and historical explication of major writers of later medieval literature. May be repeated for credit with topic or instructor change. P/NP or letter grading.

Drama to 1576. (5) (Formerly numbered 150.) Lecture, four hours; discussion, one hour (when scheduled). Enrolled requisites: courses 10A, 10B. English drama from its Latin and Anglo-Norman roots to opening of first public playhouse. P/NP or letter grading.

Medieval Romance and Literatures of Court. (5) Lecture, four hours; discussion, one hour (when scheduled). Enrolled requisites: courses 10A, 10B. Investigation of medieval court culture, exploring concepts of nobility, royalty, and power in range of genres: romance, courtly epic, lyric, debate, and satire. Texts may include Beowulf, Laos of Marie de France, Sir Gawain and Green Knight, Pearl, and Malory’s Morte Arthure. May be repeated for credit with topic or instructor change. P/NP or letter grading.

Medieval Literatures of Devotion and Devissent. (5) Lecture, four hours; discussion, one hour (when scheduled). Enrolled 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, heretical dispute (when and Lollard manifest and translations. Texts may include Dream of Rood, South English Legendary, Ancrene Wisse, Piers Plowman, Lollard writings, macro-plays, Wakefield cycle, Showings of Julian of Norwich, and Book of Margery Kempe. May be repeated for credit with topic or instructor change. P/NP or letter grading.

Medieval Story Cycles and Collections. (5) Lecture, four hours; discussion, one hour (when scheduled). Enrolled requisites: courses 10A, 10B. Exploration of medieval story cycles and story collections as narrative forms. Medieval story cycles engage in complex literatue across medieval cultures, periods, genres, and languages, while story collections often stage art of storytelling within narrative frame to exhibit about powers of literary product. May be repeated for credit with topic as gathered of Matter of Britain, Matter of Rome, or Matter of France, also Malabigoni, manuscript collections such as Aucunchel manuscript or Exeter book, framed narratives such as Decameron, Canterbury Tales, 1001 Nights, and Gower’s Confessio Amantis, or collections of ex elems, legends, and diacts. May be repeated for credit with topic or instructor change. P/NP or letter grading.

Medieval Histories, Chronicles, and Records. (5) Lecture, four hours; discussion, one hour (when scheduled). Enrolled requisites: courses 10A, 10B. Exploration of medieval history writing traditions and medieval histories survive in every language of medieval Britain, including Latin, Old English, Welsh, Irish, Anglo-Norman French, and Middle English. Multilingual ubiquity of history writing points to pressures of history on history writing — histories are always shaped by political, cultural, linguistic, and textual pressures. May be repeated for credit with topic as gathered histories, chronicles, material records, and historiographically engaged texts. May be repeated for credit with topic or instructor change. P/NP or letter grading.

Cultures of Middle Ages. (5) Lecture, four hours; discussion, one hour (when scheduled). Enrolled requisites: courses 10A, 10B. 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 intercultural encounter and transmission: classical or patrician traditions into medieval culture, crusade, travel literature, and literature of contact zones, including interactions between Celtic, Arabic, and Norse societies, and discussions between Pagans, Jews, Christians, and Muslims. May be repeated for credit with topic or instructor change. P/NP or letter grading.

Medievalisms. (5) Lecture, four hours; discussion, one hour (when scheduled). Enrolled requisites: courses 10A, 10B. Exploration of postmedieval production of Middle Ages as period for scholarly study, technical premodern other to modern and contemporary, and academic and commodity continually reinvented by postmedieval writers, artists, and popular media. Topics may include 19th-century production of 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.

Shakespeare: Poems and Early Plays. (5) (Formerly numbered 142A.) Lecture, four hours; discussion, one hour (when scheduled). Enrolled requisites: courses 10A, 10B. Intensive study of selected poems and early plays, with topics, and tragedies through Hamlet. P/NP or letter grading.

Shakespeare: Later Plays. (5) (Formerly numbered 142B.) Lecture, four hours; discussion, one hour (when scheduled). Enrolled requisites: courses 10A, 10B. Intensive study of representative problem plays, major tragedies, Roman plays, and romances. P/NP or letter grading.

Topics in Shakespeare. (5) (Formerly numbered 142C.) Lecture, four hours; discussion, one hour (when scheduled). Enrolled requisites: courses 10A, 10B. Study of major works of Milton, with emphasis on Paradise Lost. P/NP or letter grading.

Literatures of English Renaissance and Early Modern Period. (5) (Formerly numbered 151.) Lecture, four hours; discussion, one hour (when scheduled). Enrolled 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.

Theatrical Renaissance: Early Modern Texts and Performances. (5) (Formerly numbered 152B.) Lecture, four hours; discussion, one hour (when scheduled). Enrolled 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 tests, performers, and performance spaces from 1509 to 1642. May be repeated for credit with topic or instructor change. P/NP or letter grading.

Renaissance Worlds. (5) (Not same as course 154 prior to Fall Quarter 2011.) Lecture, four hours; discussion, one hour (when scheduled). Enrolled 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.

Renaissance Subjects. (5) (Not same as course 155 prior to Fall Quarter 2011.) Lecture, four hours; discussion, one hour (when scheduled). Enrolled requisites: courses 10A, 10B. Discussion of limitations of personhood in early modern period, with attention to issues such as personal voice, relations of privacy/community, bodily/soulselves, others/as, as impacted by quotients such as gender, sexuality, race, and eth-
nicity 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) Not same as course 156 prior to Fall Quarter 2011.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B. Examination of religious thought and practice with Reformation and Counter-Reformation enterprises in early modern period and consideration of how various types of writing — prayers, prayer books, sermons, historical chronicles, essays, treatises, apologists, biographies, etc. — reflect and address 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 topic such as women’s spirituality, philosophical exegesis, and the devotional literature of the late Renaissance and early modern period. May be repeated for credit with topic or instructor change. P/NP or letter grading.

157. Translation and Innovation in English Renaissance and Early Modern Period. (5) Not same as course 157 prior to Fall Quarter 2011.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B. Study of major works of English literature written in English or Latin and translated into English from Latin and Greek in relation to literatures of antiquity and continental Renaissance. Topics may include epic tradition, forerunners of novel, Renaissance humanisms, literature of love, monsters, representations of 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 periods and topics. May be repeated for credit with topic or instructor change. P/NP or letter grading.

160A. Literature of Restoration and Earlier 18th Century. (5) Formerly numbered 154.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B. Study of major works or 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) Formerly numbered 155.) 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. Considers poetry across genres and throughout period. Topics may include rise of satire, verse forms including Pindaric ode, mock-epic, and verse-epistle, questions of literary identity, and poetry’s role in politics, empire, and gender. May be repeated for credit with topic or instructor change. P/NP or letter grading.

161B. Drama in English to 1850. (5) Formerly numbered 156.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B. Survey of drama in English until 1850. May be repeated for credit with topic or instructor change. P/NP or letter grading.

161C. Novel in English to 1850. (5) Formerly numbered 157.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B. Survey of novel across novella to 1850. May be repeated for credit with topic or instructor change. P/NP or letter grading.

162A. Earlier Romantic Literature. (Formerly numbered 161.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B. Intensive study of writings by Blake, Wollstonecraft, W. Wordsworth, Coleridge, and Austen, with collateral readings from such authors as Godwin, Burke, Paine, St. Clair, Moore, Peacock, Landon, H. Hermsen, and Prince. P/NP or letter grading.

162B. Later Romantic Literature. (Formerly numbered 162.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B. Exploration of relationships among and between different revolutionary currents — political, economic, and aesthetic — in British Romantic period, developing readings of literary texts that situate them in revolutionary context out of which they emerged, and to which they contributed in turn. Recovery of sense of how literary and extra-literary texts emerged in common relationship; development of broader understanding of nature, Romanticicism and itself. Readings from work of Blake, Wordsworth, Coleridge, Southey, Austen, Byron, Keats, Wollstonecraft and others. May not be repeated for credit. P/NP or letter grading.

163B. Transatlantic Romanticism. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B. Transatlantic studies have been central in generating new conceptual frameworks for thinking through complex issues related to interconnectedness of Atlantic rim cultures. With focus on ways in which cultures, ideologies, and political identities are reworked and reinscribed by transatlantic movement of peoples, ideas, and cultural artifacts, expansion of notions of Romanticism to include transatlantic perspectives that understand early 19th-century poems, criticism and fiction (Milton, Blake, Wollstonecraft) as phenomenon. May not be repeated for credit. P/NP or letter grading.

163C. Jane Austen and Her Peers. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B. Study of major works written in English during early 19th century. Focus on evolution of genre in relation to cultural, social, political identities and the connections and developments of the period. May be repeated for credit with topic or instructor change. P/NP or letter grading.

164.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B. Introduction to American literatures of discovery, exploration, contact, and settlement, with emphasis on genres that express distinctive political identities and religious visions. P/NP or letter grading.

166B. American Literature, 1877 to 1832. (5) Formerly numbered 170B.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B. Study of American fiction (both novels and short stories) from Revolution through early republic, with emphasis on genres that reflect systematic attempts to create representative national literature and attention to American literary and political developments. P/NP or letter grading.

166C. American Literature, 1832 to 1865. (5) Formerly numbered 171A.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B. Historical survey of American literatures from Jacksonian era to end of Civil War, including emergence of new forms of American literary culture, political currents — political, economic, and aesthetic influences — and the development of American Romanticism. May be repeated for credit. P/NP or letter grading.

167A. American Poetry to 1900. (5) Formerly numbered 174A.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B. Study of American poetic traditions and the role of the poet in American society through the period of 19th century. Includes mainly works that have been considered central in American literature and peripheral spaces were transformed beyond recognition in this period. Particular attention to representation of American ethnic, gender, and postcolonial perspectives. P/NP or letter grading.

167B. American Fiction to 1900. (5) Formerly numbered 173A.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B. Study of American fiction (both novels and short stories) from its beginnings to early 19th century. P/NP or letter grading.

168. Major American Writers. (5) Not same as course 168 prior to Fall Quarter 2011.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B. Broad survey of representative American writers across several centuries, designed to give concise account of broad narrative of American literary development. May be repeated for credit. P/NP or letter grading.

169A. American Poetry, 1776 to 1832. (5) Formerly numbered 170A.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B. Broad survey of representative American poets and their poems from Revolution through early republic. May be repeated for credit. P/NP or letter grading.
169. Topics in Literature, circa 1700 to 1850. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B, 10C. Study of American drama and the Continental influence from 1850 through World War II. P/NP or letter grading.

170A. American Literature, 1865 to 1900. (5) (Formerly numbered 171B.) 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.

170B. American Literature, 1900 to 1945. (5) (Formerly numbered 172A.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B, 10C. Study of American poetry, mostly by living authors, with emphasis on emergent issues and poetic forms. May be repeated for credit with topic or instructor change. P/NP or letter grading.

170C. American Literature since 1945. (5) (Formerly numbered 172B.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B, 10C. Development of English poetic genres in relation to significant movements such as modernism, postmodernism, and others working in modes of realist and naturalist novel, lyrical and vernacular prose, and poetry. P/NP or letter grading.

171A. Later 19th-Century Poetry. (5) Not as course 171A prior to Fall Quarter 2011.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B, 10C. Study of American literature from turn of century to end of World War II. P/NP or letter grading.

171B. 20th-Century British Poetry. (5) (Formerly numbered 165.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B, 10C. Study of American poetry from begin-ning of 20th century, including writers such as Howells, James, and T. S. Eliot. P/NP or letter grading.

172A. Drama, 1850 to 1945. (5) (Formerly numbered 167.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B, 10C. Study of American drama from turn of century to turn of 20th century. P/NP or letter grading.

172B. Drama, 1945 to Present. (5) (Formerly numbered 168.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B, 10C. Study of drama in English, with its principal continental influences, since World War II. P/NP or letter grading.

172C. American Drama. (5) (Formerly numbered 176.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B, 10C. Study of American drama from its beginning to present day. Periodical history may vary with instructor. May be repeated for credit with topic or instructor change. P/NP or letter grading.

173A. American Poetry, 1900 to 1945. (5) (Formerly numbered 174B.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B, 10C. Study of American poetry since end of World War II. P/NP or letter grading.

173B. American Poetry since 1945. (5) (Formerly numbered 174C.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B, 10C. Study of American poetry since beginning of 20th century to end of World War II. P/NP or letter grading.

173C. Contemporary American Poetry. (5) (Not as course 181C prior to Fall Quarter 2011.) Lecture, four hours; discussion, one hour (when scheduled). Examination of literatures from or about this time peri-od. 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.

174A. American Fiction, 1900 to 1945. (5) (Formerly numbered 173B.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B, 10C. Study of American novels and short stories from beginning of 20th century to end of World War II. P/NP or letter grading.

174B. American Fiction since 1945. (5) (Formerly numbered 173C.) 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) (Not as course 174C prior to Fall Quarter 2011.) 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 aesthetics. May be repeated for credit with topic or in-structor change. P/NP or letter grading.

175. American Nonfictional Prose. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B, 10C. Study of American nonfictional prose, autobiographies, travel narratives, and other. May be repeated for credit with topic or instructor change. P/NP or letter grading.

176. Hemispheric American Literature. (5) (Not as course 176 prior to Fall Quarter 2011.) Lecture, four hours; discussion, one hour (when sched-uled). Enforced requisites: courses 10A, 10B, 10C. Study of American literature from hemispheric rather than nation-based perspective. His-tonic breadth in study of American literature while pos-ing 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 in-structor change. P/NP or letter grading.

177. Interdisciplinary Studies of American Culture. (5) (Formerly numbered 178A.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B, 10C. May be repeated for credit with topic or instructor change. P/NP or letter grading.

179. Topics in Literature, circa 1850 to Present. (5) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisites: courses 10A, 10B, 10C. May be repeated for credit with topic or instructor change. P/NP or letter grading.

180. Topics in Literature. (5) Seminar, three or four hours. Enforced requisites: courses 10A, 10B, 10C. 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.

181A. Topics in Genre Studies. (5) (Not same as course 181A prior to Fall Quarter 2011.) Seminar, three or four hours. Enforced requisites: courses 10A, 10B, 10C. 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.

181B. Topics in Interdisciplinary Studies. (5) (Not same as course 181B prior to Fall Quarter 2011.) Seminar, three or four hours. Enforced requisites: courses 10A, 10B, 10C. 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.

182A. Topics in Medieval Literature. (5) (Formerly numbered 181A.) Seminar, three or four hours. Enforced requisites: courses 10A, 10B, 10C. 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.

182B. Topics in Renaissance and Early Modern Liter-ature. (5) (Formerly numbered 181B.) Seminar, three or four hours. Enforced requisites: courses 10A, 10B, 10C. 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.

182C. Topics in 18th-Century Literature. (5) (For-merly numbered 181D.) Seminar, three or four hours. Enforced requisites: courses 10A, 10B, 10C. 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.

182D. Topics in Romantic Literature. (5) (Formerly numbered 181E.) Seminar, three or four hours. Enforced requisites: courses 10A, 10B, 10C. 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.

182E Topics in 19th-Century Literature. (5) (For-merly numbered 181F.) Seminar, three or four hours. Enforced requisites: courses 10A, 10B, 10C. 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.

183A. Topics in Colonial American Literature. (5) (Formerly numbered 182A.) Seminar, three or four hours. Enforced requisites: courses 10A, 10B, 10C. 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.

183B. Topics in 19th-Century American Literature. (5) (Formerly numbered 182B.) Seminar, three or four hours. Enforced requisites: courses 10A, 10B, 10C. 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.

183C. Topics in 20th- and 21st-Century Literature. (5) (Formerly numbered 181G.) Seminar, three or four hours. Enforced requisites: courses 10A, 10B, 10C. 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.

184. Topics in Imperial, Transnational, and Post-colonial Studies. (5) (Not same as course 184 prior to Fall Quarter 2011.) Seminar, three or four hours. Enforced requisites: courses 10A, 10B, 10C. 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.

190H. Honors Research Colloquia in English. (1) Seminar, one hour. Enforced corequisite: course 198A or 198B. Designed to bring together students under-taking supervised tutorial research for departmental
honors in seminar setting with one or more faculty members to discuss their own work in progress and critical readings related to honors projects. Led by one supervising faculty member. May be repeated for credit. P/NP grading.

M191A. Topics in African American Literature. (5) (Formerly numbered M179A.) (Same as Afro-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 Harleimi Renaissance, African American Literature in Nadir, 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 Literature. (5) (Formerly numbered M179B.) (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. Topics include labor and literature; Chicana/Chicana visions of Los Angeles; immigration, migration, and exile; cultural geography and externality 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.

M191C. Topics in Asian American Literature. (5) (Formerly numbered M179C.) (Same as Asian American Studies M191F.) Seminar, three or four hours. Enforced requisite: English Composition 3 or 3H. Variable specialized studies course in Asian American literature. Topics may include genres (autobiography, novel, poetry, short fiction, or drama); specific nationalities within Asian American community; themes of transnational migration; interdisciplinary, or intrafamilial 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.

M191D. Topics in Queer Literatures and Cultures. (5) (Same as Lesbian, Gay, Bisexual, and Transgender Studies M191D and Women’s Studies M191D.) Seminar, three or four hours. Enforced requisite: English Composition 3 or 3H. 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.

M191E. Topics in Gender and Sexuality. (5) (Same as Lesbian, Gay, Bisexual, and Transgender Studies M191E and Women’s Studies M191E.) Seminar, three or four hours. Enforced requisite: English Composition 3 or 3H. 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: course 140A or 140B. Open only to students who are eligible and apply for honors program 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. Letter grading.


193. Colloquia and Speakers’ Series Undergraduate Seminars: English. (1) Seminar, one hour. Limited to undergraduate students. Discussion of current critical literature and/or creative readings by writers, artists, and scholars. Engaged 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.

195. Community or Corporate Internships in English. (4) Tutorial, to be arranged. Limited to juniors/seniors. Internship in community agency, education, museum, or art venue, or business. Students meet on regular basis with instructor and provide periodic written reports of their experience. May require analysis and evaluation determined by supervising faculty member. May be repeated for credit. Individual contract with supervising faculty member required. P/NP grading.

195CE. Community and Corporate Internships in English. (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 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 repeated for credit with consent of Center for Community Learning. Individual contract with supervising faculty member required. P/NP 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 member and student. Assigned reading and discussion or field experience of subject matter required. May be repeated for credit. Individual contract required. P/NP or letter grading.

198A-198B. Honors Research in English. (5-5) Tutorial, four hours. Limited to juniors/seniors. Development and completion of honors thesis under direct supervision of faculty member. May be repeated for credit. Individual contract required. In Progress (198A) and letter (198B) grading.

199. Directed Research or Senior Project in English. (2 to 8) Tutorial, to be arranged. Limited to juniors/seniors. Supervised individual literary research and creative projects 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


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 pre-Socrates to Descartes, including classical literary theory, ancient Greek thought, and pre-Christian and Christian thought. 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 year to year but may include such figures as Freud, Durkheim, Saussure, Heidegger, Shklovsky, Benjamin, Adorno, Levi-Strauss, Lacan, Barthes, Derrida, Deleuze, Fanon, Foucault, Irigaray, Lyotard, Bourdieu, and Bhabha. S/U or letter grading.

203. Computers and Literary Research. (4) Lecture, four hours. Prior knowledge in this area is not required. Practice in using computer programs for analysis of literary style, content, and authorship. S/U or letter grading.


M205A. Studies in Oral Tradition: History and Methods. (4) (Same as Scandinavian M271.) Seminar, three hours. Exploration of scholarly and literary attempts to study, define, analyze, promote, and/or appropriate oral traditions, from Homer and ancient Greece to origins of vernacular literatures, European romantic rediscovery of oral tradition, 20th-century heuristic models of oral composition, and modern-day electronic media and popular verbal genres, such as jokings and rapping. S/U or letter grading.

M205B. Collecting Oral Tradition. (Same as Scandinavian M272.) Seminar, three hours. Description and evaluation of various modern approaches to collecting and documenting oral tradition as text, performance, and sociocultural event. 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, song, epic, proverb, riddle, folktale, 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, lexicography, phonology, and pronunciation to enable students to read Old English 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 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.


230. Workshop: Creative Writing. (2 to 4) Lecture, two to four hours. Preparation: submission of writing samples in 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), 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.

245. Chaucer. (4) Lecture, four hours. 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.


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 English 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 themes 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.

M260A. Topics in Asian American Literature. (4) (Same as Asian American Studies M256A.) Seminar, three hours. Graduate seminar that examines and critically evaluates writings of Asian Americans. May be repeated for credit. S/U or letter grading.

261. Studies in Chicana/Chicano Literature. (4) Seminar, three hours. Intensive research and study of major themes, authors, and issues in Chicana/Chicano literature and culture. Examination of political, aesthetic, economic, and cultural context that emerges in Chicana/Chicano 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 Afro-American Studies M200E.) Lecture, four hours. Intensive research and 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 (Irish, Welsh, Old Irish, or modern Celtic languages, 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.

265. Postcolonial Literatures. (4) Seminar, three hours. Study of aesthetic, historical, and social backgrounds to literatures of former British colonies that became independent after 1947. General issues related to way imperialism, colonialism, and postcolonialism have helped shape and have been shaped by literature in English. May be repeated for credit. S/U or letter grading.

M266. 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 tribal contexts have been translated into contemporary literary texts (fiction, poetry, essay, and drama). Survey from secondary sources of interdisciplinary methodology. All approaches taken from literary analysis, social anthropology, folklore, linguistics, and ethnomusicology. May be repeated for credit with instructor and topic change. Letter grading.


272. Current Issues in Teaching English. (4) Seminar, four hours. Focus on one of variety of topics of special current interest. May be repeated for credit. S/U or letter grading.


M299. Directed Individual Study. (2 to 4) Tutorial, to be arranged. Limited to students preparing for first qualifying examination or engaging in intensive directed research project. May not be applied toward any course requirement for degree. Consult graduate counselor to enroll or obtain information. S/U or letter grading.


599. Ph.D. Dissertation Research. (4 to 8) Tutorial, to be arranged. Limited to Ph.D. students unable to enroll in seminars in their fields or to students concurrently enrolled in such seminars. (Exception to this rule must be requested by petition.) S/U grading.
# Environmental Health Sciences

## School of Public Health

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Richard J. Jackson, M.D., M.P.H., Chair

## Professors

- Richard F. Ambrose, Ph.D.
- Michael D. Collins, Ph.D.
- Jared M. Diamond, Ph.D.
- Curtis D. Eckhardt, Ph.D.
- John R. Froines, Ph.D.
- Hilary A. Godwin, Ph.D.
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- Climis A. Davos, Ph.D.

## Adjunct Professors

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- Jennifer L. Valentine, Ph.D.

## Assistants

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## In Residence

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- Robert H. Schiestl, Ph.D.
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## Professors Emeriti

- Irwin H. Suffet, Ph.D.
- Robert H. Schiestl, Ph.D.
- Shane S. Que Hee, Ph.D.
- Richard J. Jackson, M.D., M.P.H.
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### Box 951772

UCLA
School of Public Health

## The Department of Environmental Health Sciences

The department offers M.S. and Ph.D. degrees in Environmental Health Sciences and, through the School of Public Health, the M.P.H. and Dr.P.H. degrees with a specialization in environmental health sciences (see Public Health Schoolwide Programs). In addition, a unique doctoral degree (Doctor of Environmental Science and Engineering — D.Env.) is offered by the interdepartmental Environmental Science and Engineering Program which is administered through the department. The interdepartmental Molecular Toxicology Program also offers a Ph.D. degree.

## Graduate Study

## Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://www.gdnet.ucla.edu/gasalibrary/pgmrqintro.htm. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

## Graduation Degrees

- The Department of Environmental Health Sciences offers Master of Science (M.S.) and Doctor of Philosophy (Ph.D.) 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 year each of chemistry, physics, and biology. Basic principles of environmental health and their potential impact on human health. Environmental health policies and their implications for public health. May be repeated for credit. Concurrently scheduled with course C125. P/NP or letter grading.

**C125. Atmospheric Transport and Transformations of Airborne Chemicals.** (4) Lecture, four hours. Preparation: one year each of calculus, one course each in physics, organic chemistry, and physical chemistry. Designated 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 seniors and graduate and graduate students. Examination of theoretical underpinnings of several major types of regulatory policy, as well as practical issues involved in implementing and enforcing performance standards and permitting. May be repeated for credit. 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, and biotransformation. May be repeated for credit. 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 mathematics. Basic theory and application of aerosol science 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. Requisite: 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. Requisite: course C140. Designed to provide students with understanding of processes and mechanisms that influence the mobility and persistence of organic chemicals in aquatic environments. Concurrently scheduled with course C264. P/NP or letter grading.

**C166. Environmental Microbiology.** (4) (Same as Civil Engineering M166L.) Lecture, four hours; discussion, two hours; outside study, six hours. Requisite: course Civil Engineering 153. Microbial metabolism and its metabolic capabilities, microbial genetics and its potentials, growth of microbes and kinetics of growth, microbial ecology and diversity, microbiology of wastewater treatment, probing of microbes, public health microbiology, pathogen control. Letter grading.

**M166L. Environmental Microbiology and Biotechnology Laboratory.** (1) (Same as Civil Engineering M166L.) Laboratory, two hours; outside study, two hours. Concurrently scheduled with course M166. General laboratory practice within environmental microbiology, sampling of environmental samples, classical and modern molecular techniques for enumeration of microbes from environmental samples, techniques for determination of microbial activity in environmental samples, laboratory setups for studying environmental biotechnology. Letter grading.

**C180. Principles of Nanobiological Interactions and Nanotoxicology.** (4) Lecture, four hours. Requisite: basic understanding of biology and chemistry at level required for admission to University of California at undergraduate level in environmental, physical, or natural sciences. Introduction to commonly used vocabulary in nanoscience required to appreciate biological interactions and potential toxicity of nanomaterials. Discussion of synthesis and physical-chemical characterization of engineered nanomaterials. Development of understanding of unique properties of engineered nanomaterials and how these properties contribute to biological interactions. Relation of properties of engineered nanomaterials to their potential for transport, reactivity, uptake, and toxicity in natural environments and in body. Concurrently scheduled with course C280. P/NP or letter grading.


**197. Individual Studies in Environmental Health Sciences.** (2 to 4) Tutorial, four hours. Limit to juniors/seniors. Individual intensive study, with schedule of 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


200C. Case Studies in Environmental Health Sciences. (2) Lecture, two hours. Requisites: courses C200A, C200B. Environmental and public health challenges of 21st century are changing so quickly and are so interdigitated with social, resource, economic, and global issues that it becomes necessary for environmental health professionals to be able to operate comfortably within contextual boundaries and under pressures of real-time decision making. Examination of headlines of last 12 months that offer examples of managing change and crisis. Letter grading.


203. Seminar: Ecotoxicology. (2) Seminar, two hours. Discussion of various topics in ecotoxicology. Topics vary from term to term and include aspects of environmental health, toxicology, and ecology. May be repeated for credit. S/U grading.

204. Seminar: Exposure Assessment. (2) Seminar, two hours. Discussion of various topics in exposure asessment. Topics vary from term to term and include aspects of environmental health, toxicology, and ecology. May be repeated for credit. S/U grading.

205. Environmental Health Sciences Doctoral Seminar. (2) Seminar, two hours. Limited to environmental health sciences doctoral students. Presentation of current research of environmental health sciences doctoral students. May be repeated for credit. S/U grading.


207. Introduction to Geographic Information Systems. (4) Lecture, two hours; laboratory, two hours. Introduction to geographic information systems (GIS), including use of GIS software, mapping, geocoding, and data analysis. S/U or letter grading.

208. Built Environment and Health. (4) Lecture, three hours; discussion, one hour. Limited to public health majors. Multidisciplinary, the course provides a multidisciplinary course on built environment and health and breaking down silos. U.S. and other developed, as well as developing, countries are facing increasing lethal and costly epidemics of acute and chronic diseases related to land use and built environment decisions. While hazards presented by air and water pollution are well recognized for acute, infectious, and toxicological illnesses, there is increasing recognition of hazards presented by building and community designs that fail to recognize human health. Land use and built environment decisions are age group and geographic and racial minority. Impacts range from very acute (motor vehicle trauma) to long term (obesity, cancer, heart disease). Decisions have as their bases economic, financial, and social factors, as well as public health, and other factors. Analysis of each factor and related disease endpoints. S/U or letter grading.

209. Practical Applications in Environmental Health Sciences. (2) Lecture, two hours. Enforced requisites: courses C200A, C200B. Description of many leading environmental and occupational health problems that environmental health practitioners face today, conducted as series of lectures, assignments, handson-field 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 Registered Environmental Health Specialist (REHS) certification. S/U or letter grading.


211. Epidemiological 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 epidemiological methods in approaches to understanding incidence risk factors and prevention strategies of violence and violence-related injury. Letter grading.


214. Children’s Environmental Health: Prenatal and Postnatal. (4) Lecture, four hours. Preparation: one year each of chemistry and biology. Examination of how environmental exposures to chemical, physical, and biological agents during period of maturation (from fertilization to adulthood) cause pathophysiological perturbations in homeostasis at any stage during life. Letter grading.

220. Public Health Microbiology. (4) (Same as Epidemiology M225.) Lecture, four hours. Preparation: introductory microbiology. Requisites: Epidemiology 200A, 200B, and 200C (or 100). Corequisite: course M225L. Role of public health laboratory is to support testing needs of programs. To successfully fulfill this role, laboratory must provide information based on most sensitive and specific technologies available. Coverage of common infectious disease agents of public health importance and definition of impact of molecular biology on disease detection and epidemiology in modern public health laboratory. S/U or letter grading.


225. 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 physics, chemistry, and geophysics. Impacts of pollutants 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.

225S. Atmospheric Transport and Transformations of Airborne Chemicals. (3) (Formerly numbered 225S.) Lecture, four hours. Limited to course; only for graduate, nonthesis, students. Examination of theoretical underpinnings of several major types of regulatory policy, as well as practical issues involved in implementing and enforcing each. Emphasis on interactions and interrelationships, which takes forms from various disciplines and viewpoints. Focus on traditional command and control regulation (including self-executing performance standards and permitting), market-based regulatory approaches (such as emissions trading), remediation, and emerging regulatory approaches such as management-based regulation and alternatives assessment. Issues of compliance and enforcement. Concurrently scheduled with course C125S.

C240. Fundamentals of Toxicology. (4) (Formerly numbered 240C.) 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 C240L. Letter grading.

M242. Toxicodynamics. (Same as Molecular Toxicology M242.) Lecture, one hour; discussion, one hour. Preparation: undergraduate biology and chemistry courses. Requisite: course C240. Examination of range of factors on mechanisms and outcomes. Focus on understanding of toxins, dose-response, genetics, toxicodynamics. Student presentation of papers selected by instructor on various aspects of toxic mechanisms, including free radical mechanisms, mechanisms of cell death, metal toxicity/toxicology, intracellular pH and calcium regulation, stress and adaptive pathways, DNA repair/mutagenesis, carcinogenesis, and teratogenesis. Discussion of various papers. S/U or letter grading.

M245. Laboratory in Toxicological Methods. (2) (Same as Molecular Toxicology M245 and Pharmacology M245C.) Lecture, one hour; laboratory, four to five hours. Survey of essential techniques used in study of toxic substances. Experiments conducted within known toxicant to demonstrate its effect at molecular, cellular, and tissue levels. Presentation of principles of techniques and methods of data analysis in discussion session prior to laboratory. Letter grading.

M246. Molecular Toxicology. (4) (Same as Molecular Toxicology M246.) Lecture, four hours. Enforced requisite: course C240. Fundamental aspects of toxicology required for deep understanding of toxicological processes, with research-oriented outlook. Dissemination of information about important molecular toxicological topics to make students think about them from research perspective. Students will identify and select research areas of molecular toxicology, how to most optimally extract important information from research papers, how to critique papers, how to formulate alternative hypotheses for data in papers, how to formulate ideas for future research, and how to express their ideas effectively in oral settings. Letter grading.

250D. Industrial Hygiene Practice. (2) Seminar, two hours. Requisites: courses C200A, C200B. Presentation of topics that are relevant to current practice of occupational health. Topics include discussions of regulatory framework, risk assessment and risk communication, new legislation, and emergent occupational health issues. S/U grading.


C252D. Properties and Measurement of Airborne Particles (Practical). (4) Lecture, two hours; laboratory, two hours; outside study, two hours. Preparation: one year each of chemistry, physics, and calculus. Basic theory and application of aerosol science to environmental problems, including properties, behavior, sampling, and measurement of airborne particles and quantitative problems. Concurrently scheduled with course C252D. S/U or letter grading.


C252F. Industrial Hygiene Measurements Laboratory. (3) Laboratory, three hours. Corequisites: courses C252D, C252E. Limited to industrial hygiene majors. Laboratory methods for collection and measurement of gases, the analysis of gases, aerosols, and reaction products found in occupational environment. S/U or letter grading.
252G. Industrial and Environmental Hygiene As-
se ssment. (4) Lecture, one hour; discussion, two hours; laboratory, two hours; outside study, four hours. Requisites: courses C200A, C200B, C252D, C252E, C252F. Environmental and industrial hygiene sampling and assessment via walk-through surveys, lectures, chemical field measurements, laboratory calibration, and analyses and reports, with emphasis on chemical, physical, and ergonomic hazards. Letter grading.

253. Physical Agents in Work Environment. (2 to 4) (Formerly numbered 253A, 253B.) 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. Requisites: course C252D. Principles and applications of control technology to industrial environments, including general and local exhauster 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. Preparation: knowledge of biological monitoring and health surveillance to assess occupational and environmental exposures to organic and inorganic chemicals and physical factors. Letter grading.

C257. Risk Assessment and Standard Setting. (4) (Formerly numbered 257F, 257G.) Seminar, four hours. Requisites: courses C240, 251, 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 specific 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: course C252E. Biostatistics 100A. 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 aspects, and regulation and practice of handling hazardous wastes. Letter grading.

259A. Occupational Safety and Ergonomics. (4) Lecture, four hours. Overview of most frequent and severe occupational exposures, their distribution, causation, analysis methods, and control approaches, including work-related musculoskeletal disorders, falls, machinery, chemicals and physical agents. Special emphasis on critical evaluations of literature. Letter grading.


259G. Field Observation, and Facility De-
sign. (3) Lecture, three hours. Requisite: course 259A. Introduction to application of fire sciences, engineering, and management principles to prevention, suppression, emergency response, and control of fire and explosion damage and injury. Letter grading.

261. Chemical Behavior of Aquatic Systems. (4) Lecture, three hours. Requisites: courses C250A, C200B, C200C, Environment 20B. Mathematically based, fundamental chemistry of ocean waters, rivers, groundwater, and water treatment systems. Topics include thermodynamics of natural waters, acids and bases, carbon dioxide cycle, solubility product, pH and redox, and application of these concepts to water and wastewater treatment. S/U or letter grading.

C264. Fate and Transport of Organic Chemicals in Aquatic Environment. (4) (Formerly numbered 264E.) Lecture, four hours. Preparation: bachelor's degree in science, engineering, geophysics, chemistry, biology, or public health. 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 C164E. S/U or letter grading.

M270. Work and Health. (4) (Formerly numbered 270J.) (Same as Community Health Sciences M278.) 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; measurement (including hands-on experience), contextual factors (gender, ethnicity, social class), and how work stressors can be ameliorated. S/U or letter grading.

C280. Principles of Nanobiological Interactions and Nanotoxicology. (4) Lecture, four hours. Preparation: basic understanding of biology and chemistry at level required for admission to University of California at undergraduate level in engineering, physical, or natural sciences. Introduction to commonly used vocabulary in nanoscience required to appreciate biological interactions and potential toxicity of nanomaterials. Discussion of plant- and animal-cell behavior and characterization of engineered nanomaterials. Development of understanding of unique properties of engineered nanomaterials and how these properties contribute to biological interactions. Examination of properties of engineered nanomaterials to their potential for transport, reactivity, uptake, and toxicity in natural environments and in body. Concurrently scheduled with course C180. 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. Emphasis on current research and literature in research specialty of faculty member teaching course. S/U grading.


375. Teaching Apprentice Practicum. (1 to 4) Seminar, one hour. Preparation: one year of training and experience as teaching assistant, associate, or fellow. Teaching apprenticeship as teaching assistant or fellow. Teaching apprenticeship as teaching assistant or fellow. Letter grading.

400. Field Studies in Environmental Health Sciences. (2 or 4) Fieldwork, to be arranged. Field observation and studies in selected community environmental health organizations. Students must file field placement and program training documentation on form available from Student Affairs Office. May not be applied toward M.S. degree. Nine units may be applied toward 44-unit minimum total required for M.P.H. degree. Letter grading.

401. Environmental Measurements. (4) Lecture, two hours; laboratory, four hours. Requisites: courses C200A, C200B, C200C, Environmental Health Sciences. In-depth methods for laboratory and field applications to assess quantity of environmental pollutants in air, food, and water, and to assess degree of exposure to such factors as noise and radiation. Letter grading.

405. Operations and Management of Public Health Laboratories. (4) Lecture, four hours. Preparation: bachelor's degree in science, engineering, or public health, at least one microbiology, environmental microbiology, and inorganic toxicology courses, and one public health laboratory course. Designed for master's and doctoral students. Principles of operations and management of public health laboratories and role of laboratory play in public health infrastructure. Basic knowledge of microbiology assumed. Topics include assays and tests performed by public health laboratories, quality control, and leadership principles. S/U grading.

410A. Instrumental Methods in Environmental Sciences. (4) Lecture, four hours; discussion, two hours; other, two hours. Preparation: one year each of physics, chemistry, and biology. Theory and principles of instrumental methods through lectures and group discussions. Letter grading.

410B. Instrumental Methods Laboratory in Environ-
mental Health Sciences. (4) Lecture, one hour; discussion, one hour; laboratory, four hours. Preparation: one year each of physics, chemistry, and biology. Measurement of current topics in environmental health sciences and environmental science and engineering. May be repeated for credit. S/U grading.


415. Health Hazards of Industrial Processes. (4) Lecture, two hours; field trips, four hours. Requisite: course 252E. Industrial and occupational hazards and occupational health hazards that arise from them. Letter grading.

451. Water Quality and Health. (4) Lecture, three hours; discussion, one hour. Requisites: courses C200A, C200B, 401. Preparation: one year of training and experience as teaching assistant or fellow. Preparation: one year of training and experience as teaching assistant or fellow. Preparation: one year of training and experience as teaching assistant or fellow. Letter grading.

470. Environmental Hygiene Practices. (2) Lecture, two hours. Requisites: courses C200A, C200B, C200C, Epidemiology 100. Field methods and principles of environmental sanitation as applied to sanitarians. Topics include theory, code enforcement, and inspection procedures for applicable environmental topic areas. S/U or letter grading.

M471. Improving Worker Health: Social Move-
ments, Policy Debates, and Public Health. (4) (Same as Community Health Sciences CM470 and Urban Planning M470.) 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. S/U or letter grading.

495. Teacher Preparation in Environmental Health Sciences. (2) Seminar, two hours. Preparation: 18 units of graduate 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.
ENVIRONMENTAL SCIENCE AND ENGINEERING

Interdepartmental Program
School of Public Health

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Richard F. Ambrose, Ph.D., Chair

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Magali A. Delmas, Ph.D. (Institute of the Environment and Sustainability)
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Richard Turco, Ph.D. (Atmospheric and Oceanic Sciences, Institute of the Environment and Sustainability)
Arthur M. Winer, Ph.D. (Environmental Health Sciences)

Scope and Objectives

The UCLA Environmental Science and Engineering (ESE) Program 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 Ph.D. programs. After three decades, Dr. Libby’s vision has in fact been realized with the evolution of the program from an experimental approach into a key component of the overall effort to train environmental professionals at UCLA.

To date the program has awarded the Doctor of Environmental Science and Engineering (D.Env.) degree to over 200 students, and UCLA remains unique in the country in awarding such a degree. Many graduates have gone on to occupy critical positions in environmental research, remediation, and policy throughout the major environmental agencies in California and the nation. Other graduates have risen to senior positions in private sector companies conducting environmental research and remediation. Still other graduates are applying scientific solutions to environmental problems at national laboratories such as Oak Ridge and Lawrence Livermore Laboratories and at research institutes such as the RAND Corporation.

Although many participating interdepartmental faculty members are from the College of Letters and Science and the Henry Samueli School of Engineering and Applied Science, the program is administered through the School of Public Health where a core faculty is based in the Department of Environmental Health Sciences. No undergraduate major or master’s degree is offered.

The program is designed to train multidisciplinary professionals with an appropriate balance of breadth and specific skills, based on a strong master’s-level foundation in 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. Because the D.Env. degree is not a specialized research degree in the manner of a Ph.D., the usual extended research training period in residence at UCLA associated with a Ph.D. is replaced by an 18- to 36-month internship approved by doctoral committee and program director. Requirements for the D.Env. degree include completion of core courses in each of the following graduate degree requirements.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://www.gdnet.ucla.edu/
Epidemiology

School of Public Health

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Professors Emeriti
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Barbara R. Visscher, M.D., Dr.P.H.

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Nathan D. Wong, Ph.D.
Zunyou Wu, Ph.D.

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Vontanak Saphonn, Ph.D.

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Marian Javanbakht, Ph.D.

Mark A. Malek, Ph.D.
Roberta M. Malmgren, Ph.D.
Shira C. Shafir, Ph.D., M.P.H.
Lisa V. Smith, M.S., Dr.P.H.

Visiting Professor
Zunyou Wu, M.D., Ph.D., M.P.H., M.S.

Scope and Objectives

Epidemiology has been defined as the study of the distribution and determinants of disease and injury in human populations. Epidemiologists study variations of disease in relation to such factors as age, sex, race, occupational and social characteristics, place of residence, susceptibility, exposure to specific agents, or other pertinent characteristics. Also of concern are the temporal distribution of disease, examination of trends, cyclical patterns, 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 and to the control or prevention of disease. What distinguishes epidemiology from other clinical sciences is the focus on health problems in population groups rather than in individuals.

Epidemiology is a young field with constantly expanding boundaries. The range of activities that may be at least partly epidemiologic includes determination of the health needs of populations, 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 borrowed from other fields such as microbiology, immunology, medicine, statistics, demography, and medical geography.

There is a growing core of purely epidemiologic methodology that includes not only statistical methodology and principles of study design, but a unique way of thinking that is beyond the rote memorization of rules. The contribution of epidemiology to any study involving groups of people is being increasingly recognized and demanded.

Epidemiologists may work in many settings, including international health agencies, state and local health departments, federal government agencies and health programs, health maintenance organizations, colleges and universities, 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 M.S. and Ph.D. in Epidemiology, and, through the School of Public Health, degrees of- other characteristics, place of residence, and social characteristics, place of residence, susceptibility, exposure to specific agents, or other pertinent characteristics. Also of concern are the temporal distribution of disease, examination of trends, cyclical patterns, 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 and to the control or prevention of disease. What distinguishes epidemiology from other clinical sciences is the focus on health problems in population groups rather than in individuals.

Epidemiology is a young field with constantly expanding boundaries. The range of activities that may be at least partly epidemiologic includes determination of the health needs of populations, 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 borrowed from other fields such as microbiology, immunology, medicine, statistics, demography, and medical geography.

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The objectives of the Department of Epidemiology fall into three broad categories — research, teaching, and community service. Degrees offered include the M.S. and Ph.D. in Epidemiology, and, through the School of Public Health, the M.P.H. and Dr.P.H. 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, http://www.gdnet.ucla.edu/gasaatlibrary/pgmrqintro.htm. 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 (M.S.) and Doctor of Philosophy (Ph.D.) degrees in Epidemiology.

Epidemiology

Upper Division Courses

100. Principles of Epidemiology. (4) Lecture, two hours; discussion, four hours. Preparation: one full biological sciences course. Not open for credit to students with credit for course 200A, 200B, or 200C. Introduction to epidemiology, including factors governing health and disease in populations. Letter grading.

197. Individual Studies in Epidemiology. (2 to 8) Tutorial, four hours. Limited to juniors/seniors. Individual 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.

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 and Validity. (6) Lecture, six hours; discussion, four hours. Enforced requisite: 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 current 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 grading.


M211. Statistical Methods for Epidemiology. (4) (Same as Biostatistics M211 and 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.

M212. Statistical Modeling in Epidemiology. (4) (Same as Biostatistics M209.) Lecture, four hours. Preparation: two terms of statistics (three terms recommended). Recommended: course 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 CM248.) 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, with particular emphasis on questions. Letter grading.

220. Principles of Infectious Disease Epidemiology. (4) Lecture, three hours; discussion, one hour. Requisite: course 100 or 200C. Designed for upper division and graduate students in public health. Understanding problems and roles of epidemiology in workplace settings and public health. Letter grading.

221. Arthropods as Vectors of Human Diseases. (4) Lecture, four hours. Requisites: courses 200A, 200B, and 200C (or 100). Comprehensive overview of their role in disease transmission and vector/host relationships, and spectrum of diseases carried by arthropods for graduate students, public health professionals, and medical doctors seeking information on global prevalence of arthropod-borne diseases. Letter grading.


223. 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 individuals and populations. Emphasis on how these diseases exist in natural environment, how they are transmitted to humans, and methods for their prevention and control. Letter grading.

225. Public Health Microbiology. (4) (Formerly numbered 225.) (Same as Environmental Health Sciences 225L.) Lecture, four hours. Preparation: introductory microbiology. Corequisite: course 225L. Role of public health laboratory is to support testing needs of program. To successfully fulfill this role, laboratory must provide information based on most sensitive and specific technologies available. Coverage of common infectious disease agents of public health importance and definition of impact of molecular biology on disease detection and epidemicology in modern public health laboratory. S/U or letter grading.

225L. Public Health Laboratory. (4) (Formerly numbered 225L.) (Same as Environmental Health Sciences 225L.) Lecture, two hours; laboratory, two hours. Preparation: introductory microbiology. Corequisite: course 225L. Public health laboratory techniques for detection and identification of pathogenic microorganisms. S/U or letter grading.

226. Global Health Measures for Biological Emergencies. (4) (Formerly numbered 226.) (Same as Ecology and Evolutionary Biology M226.) Lecture, four hours; laboratory, two hours. Preparation: introductory microbiology. Corequisite: course 226L. 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 possible responses. Letter grading.

227. AIDS: Major Public Health Challenge. (4) Lecture, four hours. Requisites: courses 200A, 200B, and 200C (or 100), Biostatistics 100A or 110A. Presentation of epidemiologic, biologic, psychological, and societal characteristics of AIDS and HIV-1 infection. Discussion of policy implications and intervention strategies. S/U or letter grading.

228. Biology of HIV. (4) Lecture, three hours. Preparation: two biology courses. Requisites: course 100, Biostatistics 100A. Overview of virologic and immunologic aspects of HIV disease for epidemiology or other health disciplines. Often considered to be the most significant cause of morbidity and mortality in both developing and developed world. Examination of etiologic agents of food poisoning and factors specific to foods that allow them to become agents of disease transmission. S/U or letter grading.

229. Epidemiology of Foodborne Illnesses. (4) Lecture, four hours. Requisites: courses 200A, 200B, and 200C (or 100), Biostatistics 100A. Focus on epidemiologic aspects of etiology and development of foodborne diseases. Examination of biologic agents of food poisoning and factors specific to foods that allow them to become agents of disease transmission. S/U or letter grading.

230. Epidemiology of Sexually Transmitted Diseases. (4) Lecture, four hours. Requisites: courses 200A, 200B, and 200C (or 100). Sexually transmitted diseases; medical/biologic aspects, epidemiology of control in developed and developing countries. S/U or letter grading.

231. Principles of Control of Infectious Diseases. (2) Lecture, two hours. Requisites: courses 200A, 200B, 200C, 220. Comprehensive study of tools for control of infectious diseases and application of these tools in public health programs to achieve epidemiologic impact on disease, reduction, elimination, or eradication. Letter grading.

232. Methods in STIVH Epidemiology. (2) Lecture, two hours. Requisites: courses 200A, 200B, and 200C (or 100). Introduction to range of different methodologies used to collect data and conduct analysis on reproduct epic mic epidemiology topics, including methods that produce quantitative data and methods that produce qualitative data, with emphasis on use of methods appropriate for challenging and sensitive research topics such as sexual behavior, abortion use, and sexual abuse. Letter grading.

233. Communicable Disease Epidemiology in Corrections. (2) Lecture, two hours. Requisites: courses 200A and 200B (or 100). Overview of communicable disease epidemiology, public health program, and research issues specific to correctional population in U.S. Introduction to basic concepts and methodology of communicable pathogens such as mental health, homelessness, and community reintegration. Legal and ethical issues related to healthcare among incarcerated and potential effects on community health. S/U or letter grading.

240. Cardiovascular Epidemiology. (2) Lecture, two hours. Topics include definition, pathogenesis, descriptive epidemiology of risk factors, strategies for prevention, lipoprotein metabolism, and epidemiology of diabetes, hypertension, and chronic lung disease. Letter grading.


244. Research Methods in Cancer Epidemiology. (2) Lecture, two hours. Requisites: courses 200A, 200B, and 200C (or 100), Biostatistics 100A. Biologic, quantitative, and administrative considerations in epidemiologic cancer research. Hypothesis specification and choice of study design. Uses of descriptive epidemiology, cohort studies, case control studies, and illustrated cancer diagnosis and control. Means of identifying subjects and controls. Design of instruments. Sources of bias and confounding. S/U or letter grading.


247. Epidemiology of Injuries in Elderly. (2) Lecture, two hours. Requisite: course 100. Description of frequency of, risk factors for, and possibilities of preventing injuries in elderly populations. Comparison of injury patterns (e.g., falls) in younger versus older populations. Emphasis on methodologic issues of studying elderly people. S/U or letter grading.

248. Psychiatric Epidemiology. (2) Lecture, two hours. Requisites: courses 200A, 200B, and 200C (or 100). Introduction to basic concepts and research methods in psychiatric epidemiology. Topics include case definition, study design, instrumentation, and epidemiology of selected psychiatric disorders. Letter grading.

249. Genetic Epidemiology I. (2) Lecture, two hours. Preparation: at least one course in epidemiology, biostatistics, and genetics. Basic concepts in emerging field of genetic epidemiology. Focus on genetic study of complex diseases, determining genet-ic contributions to disease, identifying genes, and characterization of interactions with environmental factors. S/U or letter grading.

251. Epidemiology of Noninfectious Conditions. (4) Lecture, four hours. Requisites: courses 200A, 200B, and 200C (or 100), Biostatistics 100A. Pertinent epide-miology methods for study of noninfectious diseases, including that from motor vehicle crashes, occupational exposures, falls, and other major external causes, that focus on research approaches, data sources, analytical techniques. Substantial attention to related sub-problem areas presented for critical review. Letter grading.


253. Acute Traumatic and Chronic Repetitive Injury. (4) (Formerly numbered 213.) Lecture, four hours. Preparation: introductory biostatistics and epidemiology courses. Review of all aspects of contemporary nutrition sciences that require application of epidemiologic principles and methods, ranging from food-poison outbreak investigation to 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 disease outcomes. S/U or letter grading.

254. Nutritional Epidemiology I. (4) (Formerly numbered 254.) (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, ranging from food-poison outbreak investigation to 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 disease outcomes. S/U or letter grading.

255. Keeping Children Safe: Causes and Prevention of Pediatric Injuries. (2) (Same as Community Health Sciences M255.) 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, ranging from food-poison outbreak investigation to 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 disease outcomes. S/U or letter grading.

257. Advanced Nutritional Epidemiology. (2) Lecture, one hour; discussion, one hour. Preparation: intermediate biostatistics and epidemiology courses. Requisite: course 254 or 295. Preparation: for doctoral students interested in doing epidemiologic research. Methodological aspects of research in nutritional epi-
demography. Topics include why and how to conduct validation studies, adjustment for energy intake, correction of methodological problems related to genetic polymorphism, biochemical markers, gene-nutrient interaction in chronic diseases. Theoretical as well as practical aspects. S/U or letter grading.

**M258. Epidemiology of Obesity, Diabetes, and Related Disorders** (Formerly numbered 258.) (Same as Pathology M258.) Lecture, four hours. Preparation: basic biochemistry, epidemiology, molecular biology, physiology, and statistics courses. Survey of entire landscape of nutritional, biochemical, and genetic aspects of obesity and diabetes and their microvascular and macrovascular complications. Review of descriptive and analytical epidemiology of these seemingly distinct yet interrelated disorders, including so-called metabolic syndrome. Study of distributions and determinants of these disorders in Westernized populations to appreciate how and why these epidemics occurred. Through case studies students learn process of generating etiologic hypotheses that can be tested using modern molecular epidemiologic methods. Techniques of epidemiologic studies. Analysis of real data sets that include both genotype and phenotype information, with emphasis on examination of various gene/environment interactions. S/U or letter grading.

**259. Disaster Epidemiology.** (2) Lecture, two hours. Requisites: courses 200A, 200B, and 200C (or 100), Community Health Sciences 295. Introduction to epidemiologic methodology to study disasters and their health outcomes, including loss estimation, risk factor assessment, intervention, and evaluation. Letter grading.

**260. Environmental Epidemiology.** (2 or 4) Lecture, three hours. Requisites: courses 200A, 200B, and 200C (or 100). Environmental epidemiology 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 studies published in peer-reviewed literature. S/U or letter grading.

**261. Occupational Epidemiology.** (4) Lecture, two hours; discussion, box-hygiene. Requisites: courses 200A, 200B, and 200C (or 100). Methodological considerations, approaches, and limitations in epidemiologic studies of occupational and environmental hazards. Focus on integration of industrial hygiene principles and epidemiologic methods to improve exposure assessment protocols and exposure analyses for occupational/environmental health studies. S/U or letter grading.

**265. Epidemiology Methods in Occupational and Environmental Epidemiology.** (2) Lecture, two hours. Requisites: courses 200A, 200B, and 200C (or 100). Introduction to epidemiology methods applied to evaluation of human health consequences of occupational and environmental hazards, including study design, exposure assessment techniques, and common methods encountered in research focused on assessing adverse health effects resulting from occupational and environmental exposures. Topics include clusters, meta-analysis, and psychological and development, illustrated by case studies, with focus on techniques to critically evaluate and interpret current literature. Letter grading.

**266. Global Health and Tropical Medicine.** (2) Lecture, two hours. Requisites: courses 200A, 200B, and 200C (or 100). Review of current research contained in recent medical literature. May be repeated for credit. S/U or 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, infertility, orthopedic problems, and perinatal mortality. Approaches to study design and exposure assessment 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 birth cohorts. S/U or letter grading.

**268. Introduction to Pharmacoeconomics.** (2) Lecture, two hours; discussion. Requisites: courses 200A, 200B, and 200C (or 100). Pharmacoeconomics is application of epidemiologic knowledge, reasoning, and methods to study of effects and uses of drugs. Survey of contemporary roles of pharmacoepidemiology in drug development and public health, with historical background of its evolution and projections of future prospects. S/U or letter grading.

**270. Behavioral Epidemiology.** (2) Lecture, two hours. Requisite: course 100 or 200A. Introduction to range of different methodologies used to collect data and conduct analyses on behaviors studied in epidemiologic research. Emphasis on how to design and interpret data on behaviors that can be associated with disease outcomes, including methods to collect survey data (i.e., design of questionnaires, interviewing techniques, and methods to collect and analyze qualitative data, e.g., ethnographic interviews, focus groups, systematic observations). Overview on epidemiology of key behavioral factors such as lifestyle, health behaviors, and sexual behaviors. S/U or letter grading.

**271. Assessing Validity of Complementary and Alternative Healthcare Procedures.** (2) Lecture, two hours. Emphasis on the role of complementary and alternative healthcare procedures, with special emphasis on disorders in field of neurology. Focus on methods of analyzing clinical and experimental research published in journals that provide support or refute claims made by practitioners of these procedures. Primary procedures include acupuncture, chiropractic, manipulation, massage, and herbal remedies. Letter grading.

**272. Social Epidemiology.** (4) (Same as Community Health Sciences M272.) Lecture, two hours; discussion, one hour. Requisite: course 100. Relationship between sociological, cultural, and psychosocial factors in the development of new health-related epidemics and mortality. Emphasis on lifestyles and other socio-environmental factors associated with general susceptibility to disease and subsequent mortality. Letter grading.

**273. Responsible Conduct of Research in Global Health.** (2) Lecture, one hour; discussion, one hour. Requisite: 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. History 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.

**276. Connecting Epidemiologic, Medical, and Mathematical Aspects of Infectious Diseases.** (4) Lecture, four hours. Requisites: Biostatistics 100A, 100B, 200A, 200B, 200C, 220. To deepen and further integrate knowledge on infectious diseases, focus on small number of them to enable in-depth study. Each to be presented and discussed with emphasis on historical development, understanding: epidemiology, immunology and molecular basis, and epidemiologic and mathematical analysis. Letter grading.

**293. International HIV/AIDS Seminar.** (2) Seminar, two hours. Requisites: 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, political 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.

**296. Epidemiology and Policy of Occupational and Environmental Health.** (2) Letter, two hours. Requisites: 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, political 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.

**297. Topics in Population Genetics and Nutrition.** (2) Seminar, three hours. Preparation: basic courses in biochemistry, epidemiology, molecular biology, physiologic, and statistical genetics, and applications of selected topics to nutrition and social problems. S/U or letter grading.
ist events. Practical application of principles of epidemiology and public health in preparing for smallpox or other communicable disease. Letter grading.

410. Management of Epidemiologic Data. (2) Lecture, two hours. Data management for various epidemiologic study designs, confidentiality concerns; data management systems; introduction to mainframe computer programs. S/U or letter grading.

411. Research Resources in Epidemiology. (2) Lecture, one hour; discussion, one hour. Instruction and practical experience in use of varied bibliographic aids and sources of information, building of reference files, and presentation of research findings for publication. Letter grading.

412. Public Health Surveillance. (2) Lecture, two hours. Requisites: courses 200A, 200B, and 200C (or 100). Principles of scientific writing and communication. 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.

413. Methods of Scientific Communication. (2) Lecture, two hours. Requisites: courses 200A, 200B, and 200C (or 100). Principles of scientific writing and communication. 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.

414. Practical Epidemiologic Investigations. (2 or 4) Lecture, one or two hours; laboratory, one or two hours. Requisites: courses 200A, 200B, and 200C (or 100). Practical approaches to epidemic investigations presented through problem sets based on actual outbreaks. Data collection, analysis, and written presentation of findings. Letter grading.

415. Epidemiology for Developing Countries. (4) Lecture, four hours. Requisites: courses 200A, 200B, and 200C (or/and 100). Biostatistics 100A. Practical use of epidemiology, microcomputers, and spreadsheet models for estimating morbidity and mortality, developing intervention or prevention strategies, and setting program priorities in Third World settings. Letter grading.


M418. Rapid Epidemiologic Surveys in Developing Countries. (4) (Same as Community Health Sciences M418.) Lecture, four hours. Requisites: courses 200A, 200B, and 200C (or/and 100). Biostatistics 100A. Presentation of how to do health surveys in Third World countries. Practical assistance for planning and organizing surveys, including use of microcomputers to develop and test questionnaire, select sample, process and analyze data, and prepare final report. Letter grading.

420. Field Trials in Developing Countries. (4) Lecture, four hours. Requisite: 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 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 not be applied toward minimum 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 M.S. minimum total course requirement. May be repeated for credit. S/U or letter 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 M.S. 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.

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**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 and art practice relate to other aspects of culture, society, politics, and economics. Courses are also available on the philosophy 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 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 for 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 an 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 produce 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...
The Major
Jazz Studies Concentration — Composition Emphasis
Required: Ethnomusicology M110A, M110B, M111, C122A, C122B, C122C, 125A, 125B, 125C, 127A, 127B, 127C, 129A, 129B, 129C, 163, 183, 6 units of course 161T and/or 177, one 4-unit upper division elective course selected from ethnomusicology, music, or music history, one additional course selected from Ethnomusicology C124, 164, or C165, and one capstone senior recital or project (course 186).

Jazz Studies Concentration — Performance Emphasis
Required: Ethnomusicology M110A, M110B, M111, C122A, C122B, C122C, 127A, 127B, 127C, 129A, 129B, 129C, 183, 12 units of course 161T and/or 177, 12 units of course 171, one 4-unit upper division elective course selected from ethnomusicology, music, or music history, 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 and/or 162; and a minimum of eight courses (32 to 36 units) from one of the four ethnomusicology emphases (required courses/units vary per emphasis): (1) general world music, (2) performance/composition, (3) public ethnomusicology, or (4) scholarly research. See the departmental counselor for the list of courses for each emphasis.

Emphases (32 to 36 units minimum): To select an emphasis, students who entered the program as freshmen must submit an application to the department in the Fall Quarter of their third year in the program. Students who entered as transfers must select their emphasis during Spring Quarter of their first year of training at UCLA. The application must include (1) an up-to-date transcript, (2) a concise statement by the students explaining why the emphasis has been selected and how it will prepare them for their career goals, and (3) the approval of a faculty member who is a specialist in the emphasis. Students who decide on the general world music emphasis do not need to submit an application:

General World Music (for students interested in general training in world music): In addition to the lower and upper division core requirements, a minimum of eight 4-unit courses is required. Four 4-unit courses must be selected from one of the following groupings — (1) Americas and Europe, (2) Africa and Asia, (3) popular music and jazz, or (4) aesthetics, politics, psychology, technology. Students may complete the remaining four courses with other upper division ethnomusicology courses listed under this emphasis, with courses from other emphases, or with Ethnomusicology 188, 197E, or 197S courses. Performance/Composition (for students interested in a career in performance and/or composition): Students who select this emphasis must have a 3.5 grade-point average in departmental lower division core courses and a cumulative 3.0 GPA at the time of application. In addition to the lower and upper division core requirements, a minimum of eight 4-unit courses is required. Students must take four 4-unit courses in this emphasis and a minimum of four 4-unit courses in the general world music emphasis. In addition, they 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 (for students interested in careers in the music industry, the music business, archiving, or arts administration): Students who select this emphasis must have a 3.5 grade-point average in departmental lower division core courses and a cumulative 3.0 GPA at the time of application. In addition to the lower and upper division core requirements, a minimum of eight 4-unit courses is required. Students must take four 4-unit courses in this emphasis and an additional two 4-unit courses in the general world music emphasis. Students must fulfill the capstone internship requirement, which consists of three terms (8 units minimum) 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.

Graduate Study
Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://www.gdnet.ucla.edu/gasaa/library/pgmrqintro.htm. 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 (M.A.), Candidate in Philosophy (C.Phil.), and Doctor of Philosophy (Ph.D.) degrees in Ethnomusicology.
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, Southeast Asia, South Asia, Middle East, Africa, Europe, Latin America, and U.S. and Canada. P/NP or letter grading.

M7A-M7B-M7C. Introduction to Music: History, Culture, Creativity. (5-5-5) (Same as Music M10A-M10B-M10C.) Lecture, four hours; laboratory, three hours. Preparation: placement examination. Course M7A is enforced requisite to M7B, which is enforced requisite to M7C. Students must receive grade of C or better to proceed to next course in sequence. Introduction to study of music from three complimentary perspectives: its history, relation to culture, and creative structuring. Lectures from musicologists, ethnomusicologists, and composers/theorists combined with small sections in which students develop wide range of musicianship skills. Organized around broad ideas (performance, multimedia, time, place, and more) where creative and cultural implications are explored through analysis and discussion of broad repertoire of musical works spanning historical and cultural traditions. Compositional exercises, production of short compositions, and short papers dealing with historical and cultural issues required. Letter grading.

10A-10B-10C. World Music Theory and Musician- ship. (2-2-2) 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 through aural 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 musical 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 Blues. (5) Lecture, four hours; discussion, three hours. Impact of ethnicity, race, gender, and other social processes on American music in late 20th century; use of creativity and music in and 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. Traditional and popular musics from many different countries, with introduction to basic ethnomusicological concepts and development of listening and analytical skills. P/NP or letter grading.

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 African musical and dance cultures through 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 media. 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 around the world, covering music and ritual of Hinduism, Buddhism, Judaism, Christianity, Islam, and syncretic religious practices in America such as African American gospel music, Brazilian Candomble, Cuban Santeria, 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 distinctly characterize this genre. P/NP or letter grading.

50A-50B. Jazz in American Culture. (5-5) Lecture, four hours; discussion, one hour. Course 50A is not requisite to 50B. Survey of development of jazz in American culture. Discussion of different composition-al-performance techniques and approaches that distinguish different sub-styles of jazz from one another, as well as historical and theoretical topics that shaped development of jazz from its early years through modern jazz. Important historical social issues (segregation, Depression, World Wars), musical developments 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. Letter grading.

71. Instruction in Jazz Performance. (2) Studio, six hours. 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 performance skills and receive assessment of their progress in learning material. May be repeated for maximum of 12 units. Letter grading.

M87. Special Courses in Music. (5) (Same as Music M89 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 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.

91A-91Z. World Music Performance Organization. (Formerly numbered CM110A-CM110B.) Lecture, four hours; discussion, one hour. Survey of world music performance organizations and practices in contemporary societies. Eclectic presentation of diverse and perhaps most important bodies of music ever produced in U.S. Covers many contributions of other art forms, and uses of music by shamans, musical structures, and use of indigenous music in creating nationalist and popular idioms. Letter grading.

M108A-108B. Music of Latin America. (5-5) Lecture, four hours; discussion, one hour. Course M108A is not requisite to 108B. Survey of traditional and contemporary musical culture. P/NP or letter grading.

M108A. Mexico, Central America, and Caribbean Isles. (Same as Chicana and Chicano Studies M108A.) 108B. Latin South America.

M109. Women in Jazz. (4) (Same as Afro-American Studies M109 and Women's Studies M109.) Lecture, four hours; discussion, one hour. Exploration of women's contributions to world and American popular music 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.

M110A-M110B. African American Musical Heritage. (5-5) (Formerly numbered CM110A-CM110B.) Lecture, three hours; Music of Duke Ellington, his life, and far-reaching influence of his efforts. El- lington’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 art forms, and uses of music by shamans, musical structures, and use of indigenous music in creating nationalist and popular idioms. Letter grading.

M111. Ellingtonia. (4) Lecture, four hours; discussion, one hour. Survey of world music performance organizations and practices in contemporary societies. Eclectic presentation of diverse and perhaps most important bodies of music ever produced in U.S. Covers many contributions of other art forms, and uses of music by shamans, musical structures, and use of indigenous music in creating nationalist and popular idioms. Letter grading.

M113. Music of Brazil. (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 and producers who use music in their work. P/NP or letter grading.


M106B. Contemporary North American Indian Music. (4) Lecture, three hours; discussion, one hour. Contemporary Native American musical expressions, including popular styles (folk, country, rock), intertribal Indian musical genres (powwow), syncretic religious music, and traditional/historic Pan-Indian music. 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. May include related music: speech and song, use of music by shamans, musical structures, and use of indigenous music in creating nationalist and popular idioms. Letter grading.

M108A-108B. Music of Latin America. (5-5) Lecture, four hours; discussion, one hour. Course M108A is not requisite to 108B. Survey of traditional and contemporary musical culture. P/NP or letter grading.

M108A. Mexico, Central America, and Caribbean Isles. (Same as Chicana and Chicano Studies M108B.) 108B. Latin South America.

M109. Women in Jazz. (4) (Same as Afro-American Studies M109 and Women's Studies M109.) Lecture, four hours; discussion, one hour. Exploration of women's contributions to world and American popular music 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.

M110A-M110B. African American Musical Heritage. (5-5) (Formerly numbered CM110A-CM110B.) 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 art forms, and uses of music by shamans, musical structures, and use of indigenous music in creating nationalist and popular idioms. Letter grading.

CM112. African American Music in California. (4) (Same as Afro-American Studies CM112A.) Lecture, four hours. Historical and analytical examination of African American music in California, including history, migration patterns, and music styles that determined their impact on development of African American music in California. Concurrently scheduled with course CM212. P/NP or letter grading.

113. Music of Brazil. (4) Lecture, three hours. History of Brazilian music and its many unique and some reference to Portuguese antecedents. P/NP or letter grading.
117. American Popular Music. (4) Lecture, four hours; discussion, one hour. Survey of history and characteristics of American popular music and its relationship to American culture, with emphasis on 20th-century popular music and its major composers, including comparison between traditional pre-1950 popular music and trends in post-1950 popular music. P/NP or letter grading.

118. Development of Rock. (5) Lecture, four hours. Examination of historical and stylistic development of rock from 1950s to present, with attention to its sociocultural and political implications for American society and beyond. P/NP or letter grading.

119. Cultural History of Rap. (5) Same as Afro-American Studies M107.) 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.

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 retention of jazz from U.S. in various countries, with particular emphasis on cultural and social features that form basis for new jazz-ethnic music blends. P/NP or letter grading.

C122A-C122B-C122C. Jazz Styles and Analysis. (4-4-4) Lecture, four hours; outside study, eight hours. Designed for Ethnomusicology, Music, and Music History majors. Analysis of jazz styles and repertoire intended for students with music backgrounds. Concurrently scheduled with courses C222A-C222B-C222C. Letter grading.

C122E. Early Jazz to Swing Era. C122F. Bebop to Avant-garde. C122G. Jazz since Sixties.

123. Music of Bebop. (4) Lecture, three hours. Study of jazz bebop tradition, including analysis of compositions and song forms, styles of improvisation, and developments from 1940 to present. P/NP or letter grading.

124. Electric Music of Miles Davis. (4) Lecture, four hours; outside study, eight hours. Enforced requisite: course 11C. Careful examination of artistic body of Miles Davis’ electric music (1967 to 1991). Influences and imperatives that fueled his daring move from acoustic jazz to electric music. Examination of Davis’ complex relationship with music industry as his art moved through periods of multidimensional growth and evolutionary development. Much detail 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 C224. 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 notated composition. Exploration of various years of development in 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 use and application in jazz (jazz notation and theory, transposition, woodwind doublings, brass mutes, 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. Requisite: courses 126A, 126B, 129C. 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.

126C. Advanced Jazz Arranging and Orchestration. (2) Seminar, two hours. Requisites: courses 126A, 126B, 129C. Continuation of concepts from course 126B, with focus on contributions of noteworthy arrangers/orchestrators. Culminates with arrangements to be read by UCLA Jazz Orchestra I.

129A. Basic jazz harmonic constructions, as well as melodic, rhythmic, and harmonic concepts, and how to apply those elements to personal efforts in improvisations. 129B. Requisite: course 129A with grade of C or better. Medium-level jazz harmonic constructions. 129C. Requisite: course 129B with grade of C or better. Advanced-level jazz harmonic constructions.

150. Culture of Peking Opera; 150A. Elements of Peking Opera; 150B. As Anthropology M142R and World Arts and Cultures M136.) Lecture, three hours. Requisite: course 20A or 20B or 20C or Anthropology 9 or 33 or World Arts and Cultures 20. Aesthetics of jazz from point of view of worthy arrangers/orchestrators. Letter grading.

150C. History of Chinese Opera. (5) Lecture, four hours; outside study, eight hours. Designed for under-graduate Ethnomusicology, Music, Music History, and World Arts and Cultures majors. Survey of music from China’s border regions and neighboring countries: traditional and modern Peking opera and its relation to Cantonese and other genres. P/NP or letter grading.

150D-150E-150F. Studies in Chinese Instrumental Music. (4-4-4) Lecture, three hours; laboratory, one hour. P/NP or letter grading. 150B. Study of literature, major sources, paleography, theory, and philosophy of Chinese music, including transcription and analysis. 150C. Comprehensive study of Chinese musical instruments, classification system, specific musical notation, and use in context of Chinese society.

151. Music on China’s Periphery. (4) Lecture, four hours; outside study, eight hours. Designed for under-graduate Ethnomusicology, Music, Music History, and World Arts and Cultures majors. Survey of music from China’s border regions and neighboring countries: technical musical characteristics and important concepts related to traditional and modern styles from Mongolia, Uighurs of Xinjiang, Tibet, Tibet-Burman peoples, Hmong, and indigenous peoples of Taiwan. Concurrently scheduled with course C259. P/NP or letter grading.

160. Survey of Music in Japan. (4) Lecture, three hours. Survey of main genres of Japanese traditional music, including gagaku, Buddhist 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, three hours. Limited to Ethnomusicology majors. Advanced study of traditional vocal and instrumental world music. May be repeated for credit without limitation. Letter grading.

163. Pathways to Composition. (4) Lecture, four hours. Enforced requisite: course 11C. Fresh new approaches to composing music for both beginning and experienced composers, while looking at pieces from jazz, popular, electronic, and world music repertoires to gain perspective and skills. Group composition exercises, with improvisation as potent composition tool. Exploration of 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 musical language and techniques and call and response, and element of surprise to keep student compositions fresh and dynamic. Writing of compositions based on prosodic and graphic 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; outside study, six hours. Prerequisites: 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.

C165. First-Year Composition. (4) Lecture, four hours; outside study, eight hours. Enforced requisite: course 11C. Evaluation of important musical concepts and approaches to enable students to develop greater technical proficiency 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 intersected 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 compositions. Concurrently scheduled with course C270. Letter grading.

C169. Music, Science, and Technology. (4) Lecture, four hours; laboratory, four hours; outside study, four hours. Individual contract with supervising faculty member required. Letter grading.

170. Acoustics. (4) Lecture, four hours; discussion, one hour. Techniques of pure research, basic and theoretical in science and empiricism, experimental semiotics and aesthetics, acoustics, model building. Concurrently scheduled with course CM286. Letter grading.

171. Instruction in Advanced Jazz Performance. (2) Laboratory, one hour. Preparation: advanced performance ability as demonstrated by audition. Study of jazz repertoire and techniques for specific instruments and voice. May be repeated for maximum of 12 units. Letter grading.

172A. Cognitive Psychology of Music. (4) Lecture, four hours; discussion, one hour. Designed for nonmajors. Examination of psychology of music, historical background and broad field of study, including use of music as stimulus, tests and measurements, and related phenomena. Tuning systems, consonance and dissonance, tone quality. Lecture, demonstration, and discussion; tours of institutional collections and acoustical research facilities. Letter grading.


176. 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 of various styles in ensembles of three to 10 musicians. Minimum of 12 units required for jazz studies concentration students. May be repeated for maximum of 18 units. Letter grading.


181. Anthropology of Music. (4) Lecture, four hours. Designed for Ethnomusicology, Music History, and Anthropology majors. Cross-cultural examination of use of music in context of social behavior and how musical patterns reflect patterns exhibited in other cultural systems, including economic, political, religious, and social structures. P/NP or letter grading.

182. Music Industry. (4) (Formerly numbered C182.) (Same as 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. 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 Ethnomusiciology 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 theoretical in nature, contrasted with those of applied research, practical and policy-oriented in approach. Concurrently scheduled with course C286. Letter grading.

186. Senior Recital or Project. (2) Tutorial, one hour. Limited to seniors. Final project for students who, with approval from their faculty advisers, perform one-hour recital or have performed in one-hour recital. Organization and arrangement of rehearsals and performances. Letter 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 undergraduate students. Reading and discussion of writings on subjects in ethnomusicology. May be repeated for credit. P/NP grading.

195A. Community or Corporate Internships in Ethnomusicology. (2 to 4) (Formerly numbered 195.) Tutorial, six to 12 hours. Limited to juniors/seniors 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 or letter grading.

195B. Community or Corporate Internships in Public Ethnomusicology. (2 to 4) Tutorial, six to 12 hours. Limited to seniors in public ethnomusicology emphasis. Internship in supervised setting in community agency or business. Students meet on regular basis with instructor and provide weekly reports of their experience. May be repeated for maximum of 8 units. Individual contract with supervising faculty member required. P/NP grading.

196. World Music Teaching Practicum. (4) Seminar, two hours; fieldwork, three hours; outside study, seven hours. Limited to junior/senior Ethnomusicology majors. Study and practice of teaching world music repertoire. Placement in schools, labs, or non-musical settings. Concurrently scheduled with course CM288. 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 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. Letter grading.

197F. Individual Studies in Ethnomusicology. (4) Tutorial, four hours; fieldwork, 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. 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.

201. 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. Letter grading.

202. 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.

C204. Aesthetic and Philosophical Foundations in Systems Musicology. (4) Seminar, three hours; outside study, nine hours. Limited to Ethnomusicology majors. Comprehensive overview of critical approaches to aesthetics in systematic musicology. Exploration of aesthetic, theoretical, and philosophical aspects of music, including music history, culture, and society. Concurrently scheduled with course C178. Letter grading.

205. Seminar: Information Technology and Research Skills. (4) Seminar, three hours. Limited to graduate ethnomusicology students. Lecture, demonstration, and practice. Basic skills for research on and about music that is essential to student careers as ethnomusicologists, specifically information technology skills, acoustics, and representational tools for nontlinguistic acoustic phenomena. Basic understanding of acoustics, ability to represent sounds in various graphic forms appropriate to them, and ability to locate and organize information sources related to field of ethnomusicology. Letter grading.

206. International Perspectives with Ethnography. (4) Seminar, three hours. Designed to show how theory and primary research cannot exist without each other, and how various authors have integrated theoretical writings and their own ethnographic or historical data. Reading of several recent ethnographies, mostly about music and possibly historical studies, in tandem with theoretical writings that inform arguments of these books. Letter grading.


208. 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 perspectives. Exploration of research problems and investigations on specific musical cultures and distinct genres of musical expression. S/U or letter grading.


CM212. African American Music in California. (4) (Same as Africana Studies CM212A.) Lecture, four hours. Historical and analytical examination of African American music in California, including history, migration patterns, and urbanism to determine their impact on 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, three hours; outside study, two hours; laboratory, one hour. Designed for Ethnomusicology, Music, and Musicology majors. In-depth analysis of jazz styles and repertoire intended for students with music backgrounds. Concurrently scheduled with course C222A-C222B-C222C. Letter grading. C222A. Early Jazz to Swing Era; C222B. Bebop to Avant-garde; C222C. Jazz since Sixties.

C224. Electric Music 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). Influences and impact for music making from acoustic to electric to jazz 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. Much detail 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 C124. Letter grading.


230. European Musics: Politics, Identities, Nationalisms. (4) Seminar, three hours; outside study, nine hours. Designed for graduate students. European classical, popular, and traditional musics, with particular attention to way in which music mirrors, negotiates, and contests ideas about and practices of national and other forms of identity, ideas developed in other domains of discourse and practice such as philosophy, history, literature, art, and folklore. Examination of way musicians, ordinary people, and politicians have used music to affect political processes involved in contesting and resolving tensions created between and among these identity formations. Historical period coverage primarily from 19th and 20th centuries, with examples from all over European continent. Letter grading.

C233A-C233B. Electric Music of Indonesia. (0-0-4) Discussion, one hour. Review of literature on European traditional and popular music, with special attention to modern issues and processes. May be taken twice for credit with different emphases. In Progress C233A, C233B and letter (C233C) grading.

C236B. Music of Africa. (4) Lecture, four hours; outside study, eight hours. Introduction to music of various African cultures and regions. Through readings, lectures, viewing of films, and analysis of music, students gain greater understanding of diverse musical traditions found on African continent and become more cognizant of contributions that people of Africa have made to world music. Concurrently scheduled with course C136B. Letter grading.


240. Music of Arabic-Speaking Near East. (4) Lecture, three hours. Requisite: course 228 or course in ear training, analysis, and theory. 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, instruments, style, technique, and practice. Emphasis on improvisation, and 20th-century trends. Concurrent participation in Near East performance ensemble (course 91N) required. S/U or letter grading.

241. Music of Iran and Other Non-Arabic-Speaking Communities. (4) Lecture, three hours. Requisite: course 282 or course in ear training, analysis, and theory. 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, instruments, style, technique, and practice. Emphasis on improvisation, and 20th-century trends. Concurrent participation in Near East performance ensemble (course 91N) required. S/U or letter grading.

251. Music of Indonesia. (4) Lecture, three hours; outside study, nine hours. Requisite: course 20C. Emphasis on music and related performing arts of Java, Bali, and other Indonesian islands. Concurrent participation in one Indonesian performance group (course 91B or 91H) required. S/U or letter grading.


256A. Music in China. (4) Lecture, four hours. Requisite: course 20C. Required for all Ethnomusicology majors. Survey of traditional, popular, and Western-influenced music currently widespread in China, including musical analysis of different genres; examination of contexts in which they exist. Investigation of profound effect of Confucian and Communist ideologies on music. Concurrently scheduled with course C156A. Letter grading.

259. Music on China’s Periphery. (4) Lecture, four hours; outside study, eight hours. Designed for graduate Ethnomusicology, Music, Musicology, and World Arts and Cultures majors. Survey of music from China’s major ethnic minorities, with emphasis on musical characteristics and important contextual issues related to traditional and modern styles from Mongolia, Uighurs of Xinjiang, Tibet, Tibet-Burman peoples of the Himalayas, and indigenous peoples of Taiwan. Concurrently scheduled with course C159. S/U or letter grading.

M261. Gender and Music in Cross-Cultural Perspective. (4) (Same as Women’s Studies M261.) Seminar, three hours. Designed to foster in-depth understanding of gender in study of music as culture. Topics range from ethnography of gender and sexuality, (de)codification of messages of resistance, and gender and politics of popular music. Limited to Ethnomusicology majors. 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 paradigms, issues, and research processes of popular music, with emphasis on world music genres, local/global markets, mass mediation, appropriation and aesthetics of style, ethnographic methods, and impact of popular music around the world. Limited to Ethnomusicology majors. S/U or letter grading.

264. 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.

265. 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 religions. S/U or letter grading.

266. Charles Seeger’s Life and Thought. (4) Seminar, three hours; outside study, nine hours. Charles Seeger’s (1886 to 1979) major writings and influence on ethnomusicological methods and research. Charles Seeger encouraged students to consider music from all over European continent. S/U or letter grading.

267. 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.

268. Modernity and Musical Experience. (4) Seminar, three hours; outside study, ten hours. Limited to graduate students. Examination of subject-centered musical ethnography to account for fragmented musical experience in modern world. Consider-
eration of local and world musics in relation to modernity, postmodernity, globality, notions of self and subject, power, and media images. Letter grading.

C269. 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 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 C169. Letter grading.

C270. Selected Topics in Composition. (4) Lecture, four hours; outside study, eight hours. Limited to graduates. Examination 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. Concurrently scheduled with course C165. Letter grading.

271. Seminar: History of Styles 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 musical systems, psychoacoustics, and methods of spectral analysis. May be repeated once for credit. S/U or letter grading.

273. Seminar: Psychology of Music. (6) Seminar, three hours. Selected 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 thought, 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 cognitive psychology, with focus on perception and interpretation of film music relative to model of musical meaning. Concurrently scheduled with course C176. Letter grading.

279. 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, sociology, 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 teaching introductory music survey courses, specifically music appreciation and general world music. Letter grading.

281A-281B. Seminars: Field and Laboratory Methods in Ethnomusicology. (6-8) 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 majors. How music industry functions and how products are created, marketed, and consumed. Techniques of pure research, basic and theoretical in nature, contrasted with those of applied research, practical and policy-oriented in approach. Concurrently scheduled with course C184. Letter grading.


CM288. Music Industry. (4) Formerly numbered C288S. (Same as Music CM292 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, 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 CM182. Letter grading.

289. Research Design and Grant Writing in Ethnomu- sicology. (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 industry functions and professional writing skills. S/U or letter grading.


291. Ethnomusicology Colloquium Series. (1) Research group meeting, one hour. Limited to graduate ethnomusicology students. Introduction to new trends and issues in discipline of ethnomusicology in effort to strengthen ties and 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 Ethnomu- sicology. (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.

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 Apprentice Practicum. (2) Eight two-hour weekly seminar sessions, plus intensive training session during Fall Quarter registration week. Preparation: appointment as teaching apprentice in Ethnomusicology Department. Required of all new teaching apprentices. Special course dealing with problems and practices of teaching ethnomusicology and systematic musicology at college level. May not be applied toward degree requirements. S/U grading.

495B. 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.

596. Directed Individual Studies. (2, 4, or 6) Tutorial, to be arranged. Only 4 units may be applied toward M.A. minimum course requirements. S/U or letter grading.

597. Preparation for Master's Comprehensive Examination or Ph.D. Qualifying Examinations. (2 or 4) Tutorial, to be arranged. May be repeated for credit. S/U grading.

598. Guidance of M.A. Thesis. (4, 8, or 12) Tutorial, to be arranged. May be repeated for credit. S/U grading.


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EUROPEAN STUDIES

Interdepartmental Program
College of Letters and Science

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Ivan T. Berend, Ph.D., Chair
Faculty Committee
Ivan T. Berend, Ph.D. (History)
J. Arch Getty, Ph.D. (History)
Françoise Lionnet, Ph.D. (Comparative Literature, French and Francophone Studies)
Mitchell B. Morris, Ph.D. (Musicology)
Michael E. Shin, Ph.D. (Geography)

Scope and Objectives

The European Studies major equips students to appreciate the richness of European cultures, societies, and languages that are fundamental to the understanding of modern Europe. The strongly pan-European program provides the opportunity to study this region from the vantage points of several disciplines in the humanities and social sciences.

The major aims to break down the traditional distinctions between the eastern and western blocs in light of important internal and global transformations and the rise of the European Union pertaining to cultural, economic, political, and social structures that are happening in Europe today.

Undergraduate Study

The European Studies major is designated a capstone major. Students complete either a variable topics seminar or directed research in European studies. Through their capstone work, students engage in in-depth analysis of selected topics in European studies, demonstrate a critical understanding of issues relevant to modern Europe, perform scholarly research and presentations on selected topics, and engage with other students in a seminar setting.
European Studies B.A.

Capstone Major

The B.A. degree in European Studies is based on four principles: (1) students acquire proficiency in a modern European language other than English, (2) students examine European societies and civilization in depth from a pan-European and regional perspective, in addition to the traditional national focus that language instruction typically provides, (3) they do so from an interdisciplinary point of view, taking courses in at least five different academic departments/programs, and (4) they take lower division courses to acquire a broad introduction to European heritage and upper division courses to study modern Europe in greater detail from the 19th century on.

Preparation for the Major

The preparation for the major consists of 24 to 30 units of foreign language, 8 units of humanities and arts courses, and 16 units of social sciences courses as follows:

Foreign Language (24 to 30 units): Students prepare for the major by studying one modern European language other than English — the declared foreign language — through the intermediate level. The relevant language departments are French and Francophone Studies (French), Germanic Languages (Dutch, German, and Yiddish), Italian, Scandinavian Section (Danish, Finnish, Norwegian, and Swedish), Slavic Languages and Literatures (Czech, Hungarian, Lithuanian, Polish, Romanian, Russian, Serbian/Croatian, and Ukrainian), and Spanish and Portuguese.

In most cases, courses 1, 2, 3, 4, 5, 6, or the equivalent fulfill the requirement. The total number of units may vary according to the selected language. Students should complete the lower division foreign language requirement by the end of their sophomore year. If students wish to study a modern European language not taught in full by any UCLA department, they should consult with the academic counselor about how to fulfill the language requirement.

Humanities and Arts (8 units): (1) One course in literature or civilization taught in a language department to be selected from Dutch 10, English 90, French 12, 14, 14W, 41, 60, German 50A, 50B, 56, 58, 59, 60W, 61A through 61D, 62W, Italian 42A, 42B, 46, 50A, 50B, Portuguese M35, Romanian 90, Russian 25, 25W, 30, 90A, 90B, 90BW, Scandinavian 40, 50, 50W, Slovak 90, Spanish M35, 42, 60A, 60C, or Yiddish 121A; (2) one course from Art History 54, Classics 10, 20, 30, 42, 51A, 51B, Comparative Literature 1A, 1B, 1C, Music History 3, 66, 68, Philosophy 1, 5, 6, or 8.

Social Sciences (16 units): (1) Two courses from two different departments selected from Economics 1, 2, 5, Geography 4, Information Studies 10, 20, Political Science 10, 20, 50, Sociology 1, 10, Statistics 10, 12; (2) two courses from one of the following series: History 1A, 1B, and 1C, or 2B, 2C, and 2D, or 3A, 3B, and 3C. Variable topics courses such as History 97C may also be applied toward the history requirement after consultation with the academic counselor.

To enter the major, students must have completed all preparation for the major requirements with an overall grade-point average of 2.5 or better. After satisfying the preparation requirements, students may declare the major in consultation with the academic counselor.

Transfer Students

Transfer applicants to the European Studies major with 90 or more units should complete as many of the following introductory courses as possible prior to admission to UCLA: two years of a modern European foreign language other than English, one language department course in European literature or civilization or one course in a European country’s literature or civilization, one course in a humanities and arts department with focus on Europe, two courses from two different social sciences departments that must have a distinct methodological or European content, and two European history courses.

Refer to the UCLA Transfer Admission Guide at http://www.admissions.ucla.edu/prospect/adm_tr.htm for up-to-date information regarding transfer selection for admission.

The Major

The major consists of European Studies 101 and 11 additional upper division courses with substantial modern European content in at least five different departments/programs, with no more than four courses in any one department/program, as follows:

Humanities and Arts (16 units): (1) One course taught in a modern European language other than English, with instruction and reading assignments in that language, to be selected from Dutch 131, French 109, 114A through 120, German 115, 116, 154, 160 through 166, 169 through 174, Italian 103A, 103B, 103C, 113 through 120, Portuguese 120A, 120B, C124, C126 through C129, Russian 108, 130A, 130B, 130C, 140A through 140D, 150, Spanish 120, Yiddish 131A, or 131B; (2) two courses with a pan-European or regional focus from Art History 110C, M110D, Philosophy 118, Scandinavian C141A, C144A, C145A, C145B, C146A, C147A, C147B, 155, 156, 161 (one course from the list of courses in item 1 may be applied); (3) one course with either a pan-European or regional focus from item 2 or a national focus selected from Art History 110A, 110B, Dutch 113, English 115B, French 137, German 102, 103, 104, Italian 110, 115B, Polish 152B, Russian 120 through 128, or Scandinavian 157.

Social Sciences (16 units): (1) One modern European history course from History 120A through 120D, 121D, 121E, 121F, 122F, 123B, 123C, 131A, 134B, 134C, 135C; (2) two courses with a pan-European or regional focus from Economics 181B, Geography 152, 183, Political Science 111C, 127A, 153A, 153B, 156B, Sociology M166 (one course from the list of courses in item 1 may be applied); (3) one course with either a pan-European or regional focus from item 1 or 2; (a) a national focus selected from History 124C, 125C, 125D, 127C, 127D, 128B, Political Science 128B, 152A, 152B, 152C, 156A.

Electives (12 units): One course from any approved humanities course list, one course from any approved social sciences course list, and a capstone research seminar or capstone directed research (European Studies 191 or 199) under the supervision of a faculty member, or a 195 internship course related to Europe.

Variable topics courses such as History 191C may be applied toward any of the above course requirements when they are relevant for the course category. Contact the academic counselor for more information.

European Studies Minor

Through an interdisciplinary curriculum, the European Studies minor offers students a modern and pan-European understanding of the region. It breaks down the traditional distinctions between the eastern and western blocs in the light of important internal and global transformations that are happening in Europe today.

To enter the minor, students must be in good academic standing (minimum 2.0 grade-point average) and have completed all lower division minor courses with a minimum overall GPA of 2.0.

Required Lower Division Courses (8 units): One humanities course on European literature or civilization selected from Comparative Literature 2C2, 4CW, Dutch 10, English 90, French 12, 14, 14W, 41, 60, German 50B, 56, 58, 59, 61A, Italian 42A, 46, 50A, 50B, Portuguese M35, Romanian 90, Russian 25, 25W, 30, 90A, 90B, 90BW, Scandinavian 40, 50, 50W, Slavic 90, Spanish M35, or 42 and one social sciences course selected from History 1A, 1B, 1C, 2B, 2C, 2D, 3A, 3B, or 3C. Students must have a minimum overall 2.0 grade-point average.

Required Upper Division Courses (20 units): European Studies 101, 191; one humanities course with a pan-European focus selected from Art History 110C, M110D, Central and East European Studies 126, Comparative Literature 126, Ethnomusicology 133, Film and Television 106B, Scandinavian C141A, C145A, C145B, C146A, C147A, C147B, 155, 156, 161, C180; one social sciences course with a pan-European focus selected from Geography 152, History 120A, 120B, 121D, 121E, 121F, 122F, 123A, 131A, 134B, 134C, 135C, M182D, Political Science 111C, 127A, 153A; one additional course from either the humanities or social sciences list above.

No more than two upper division courses (8 to 10 units) may be applied toward both this minor and students’ majors. A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major or minor requirements in another department or program.

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 in Europe
European Studies majors and minors are highly encouraged to study abroad in Europe. Students can travel to Europe through a variety of programs with various lengths (summer or during the academic year). More information about travel abroad programs is available through the UCLA International Education Office, B300 Murphy Hall, (310) 825-4995, ideo@international.ucla.edu. See http://www.ideo.ucla.edu.

European Studies
Upper Division Courses
101. Introduction to European Studies. (4) Seminar, three hours. Designed for European Studies majors. Interdisciplinary seminar that introduces students to central topics, themes, and concepts of European studies, including individual and state, cultural life, economic relations, nationalism, and international relations. Letter grading.

191. Variable Topics Research Seminars: European Studies. (4) Seminar, three hours. Research seminar on selected topics in European studies. Reading, discussion, and development of culminating paper. May be repeated for credit with topic change. Letter grading.

193. Colloquia and Speaker Series: European Studies. (1) Seminar, two hours. Limited to undergraduate students. Introduction to current scholarship in field of European studies. Attendance at selected presentations with required response papers. May be repeated for credit. P/NP grading.

199. Directed Research in European Studies. (4) Tutorial, to be arranged. Limited to senior European Studies majors. Supervised individual research under guidance of faculty mentor. Culminating paper required. May be repeated for credit. Individual contract required. Letter 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.

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Barbara Boyle, J.D., Chair

Professors
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Barbara Boyle, J.D.
Nicholas K. Browne, Ed.D.
John T. Caldwell, Ph.D.
Gilbert Cates, M.A.
Thomas F. Denove, B.A.
Gayla Gazdag, M.F.A.
Marina Goldovskaya, Ph.D.
A.P. Gonzalez, M.A.
Deborah Nadoolman Landis, Ph.D. (David C. Copley Professor for Study of Costume Design)
Stephen D. Mamber, Ph.D.
William McDonald, M.F.A.
Kathleen A. McHugh, Ph.D.
Celia L. Mercer, M.F.A.
Chon A. Noriega, Ph.D.
Nancy Richardson, M.F.A.
Robert Rosen, M.A.
Delia N. Salvi, Ph.D.
Terry Schwartz, Ph.D.
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Becky J. Smith, M.A.
Richard Walter, M.A.

Studio Professor
Peter Guber, LL.M., in Residence

Professors Emeriti
William B. Adams, M.A.
Jerzy Antczak, M.A.
William Froug, B.S.
Richard C. Hawkins, M.A.
Lewis R. Hunter, M.A.
Walter K. Kingson, Ed.D.
Barbara Marks
Mark McCarty, M.A.
Dan F. McLaughlin, B.A.
William H. Menger, M.A.
Darrell E. Ross, M.F.A.
Ruth E. Schwartz, Ph.D.
Vivian Sobchack, Ph.D.
Howard Suber, Ph.D.
Peter Wollen, B.A.
John W. Young, M.A.

Associate Professors
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C. Fabian Wigmister, M.F.A.

Assistant Professors
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Steven Ricci, M.A., Ph.D.

Lecturer S.O.E.
Harold L. Ackerman, M.A.

Lecturers
Beth Babjak
Bill J. Barminskas
Vincent M. Brook
Scott M. Brownlee
Jeffrey A. Burke
Paul Castro
Richard Edwards, M.F.A.
Rhonda Hammer, Ph.D.
Benjamin U. Harris, M.F.A.
Felicia D. Henderson, M.A.
Rory M. Kelly, M.F.A.
Jonathan A. Kunz, Ph.D.
Eric Marin, M.A.
Tom Numan
Fred A. Rubin, B.F.A.
Belinda S. Starkie, M.F.A.
Kenneth Sudilovskin
Linda Voorhees
Douglas A. Ward
Kris T. Young, M.F.A.

Adjunct Professors
Jan-Christopher Horak, Ph.D.
Myrl A. Schreibman, M.F.A.

Adjunct Assistant Professor
John Simmons, M.F.A.

Visiting Professor
Cecelia Hall

Visiting Assistant Professors
Tim T. Albaugh
Neema Barnette
Jeffrey Bell
Reginald Brown
Norman L. Buckley
Paul S. Chittik
Curtis Clayton
Michael Colleary
Robert Cooper
Duane Dell’Amico
Channing Dungey
Steve Payne
Alan Friel
Scope and Objectives
The purpose of the Film, Television, and Digital Media Department 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 Ph.D. degrees in Film and Television.

For current or specific information about the programs and faculty members, see http://www.tft.ucla.edu/programs/ftvdm.

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.

Film and Television B.A.

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.

Students are admitted for Fall Quarter only. Admission is highly competitive, and only a limited number of students can be accepted each year.

Prior to entry, students are expected to complete at least 90 quarter units (60 semester units) with a 3.0 grade-point average or better and the general education requirements of the School of Theater, Film, and Television. Applicants are also required to submit two letters of recommendation and a portfolio of original written work consisting of (1) a personal essay, (2) a critical essay on a film or major television program, and (3) a creative writing sample. For more specific information on admission requirements, see http://www.tft.ucla.edu/programs/ftvdm.

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.

Preparation for the Major

Required: Film and Television 106A, 106B or 106C, 110A, and one theater course (history, literature, or production).

The Major

Required: Film and Television 100, 115, 123, 130, 154, 155, 163, 185; one cinema and media studies elective (not previously taken as preparation for the major) from 106A, 106C, 107, 108, 112, 113, 114, M117; one course from C132 or 134; one capstone departmentally sponsored internship (course 195) and one capstone senior thesis project (course 199); and a senior concentration (at least 20 units) from one of the following areas: (1) film production — courses 175A, 175B, 178, (2) television and video production/narrative — courses 165, 176A, 176B, (3) television and video production/documentary — courses 176A, 176B, 186, (4) screenwriting — courses 135A, 135B, 135C, (4) animation — courses 181A, 181B, 181C, (5) cinema and media studies — courses 106A, 106B, 106C, 107, 108, 110C, 112, 113, 114, M117.

Students should be mindful of the exigencies inherent in filmmaking and be prepared to meet the additional demands of time and costs.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://www.gdnet.ucla.edu/gasas/library/pgmrqintro.htm. 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 (M.A.), Master of Fine Arts (M.F.A.), Candidate in Philosophy (C.Phil.), and Doctor of Philosophy (Ph.D.) degrees in Film and Television.

Film and Television

Lower Division Courses

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.

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 contem-
porary production and postproduction practices for entertainment media, including theater, film, video, and digital media. May be repeated for maximum of 8 units. Letter grading.

Upper Division Courses

100. Undergraduate Symposium. (1 or 2) Laboratory, three hours. Limited to Film and Television majors. Structure and function in which undergraduate majors meet on regular basis to discuss curricular issues, meet with faculty, and have exposure to array of guest speakers from within film industry. May be repeated for maximum of 3 units. Letter grading.

101. Story and Style: Theory and Practices of Filmmaking. (5) Lecture, three hours; screenings, three hours. Systematic analysis of how filmmakers use sound and image to tell stories on screen. Viewing of selected films as case studies to understand relationship of theory to practice and to develop skills in critical thinking, analytical writing, and strategies for creating original film and video productions. P/NP or letter grading.

106A. History of American Motion Picture. (6) Lecture/screenings, eight hours; discussion, one hour. Historical and critical survey, with examples, of American motion picture development as art form and as medium of mass communication. May be repeated once for credit with consent of department and topic change. 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. May be repeated once for credit with consent of department and topic change. Letter grading.

106C. History of African, Asian, and Latin American Film. (6) Lecture/screenings, eight hours; discussion, one hour. Critical analysis of film and industry cinema, avant garde) with specific investigative of selected directors working in various genres and modes of production (e.g., silent cinema, industry cinema, avant garde) with specific investigation of African, Asian, Latin American, and Mexican films. 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. Critical survey of American television history from its inception to present. Examination of interrelationships 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 (consumership, lifestyle, gender, race, national identity) and industrial practice (programming, policy, regulation, business). Letter grading.

110A. American Television History. (5) Lecture/screenings, five hours; discussion, one hour. Critical survey of American television history from its inception to present. Examination of interrelationships 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 (consumership, lifestyle, gender, race, national identity) and industrial practice (programming, policy, regulation, business). Letter grading.

110C. World Media Systems. (4) Lecture/viewing, four hours; discussion, one hour. Requisite: course 110A. Global analysis of internal and external broadcasting services, with emphasis on their motives, origins, technologies, and programming. Special attention to political, economic, and regulatory constraints and common world media issues. P/NP or letter grading.

M111. Women and Film. (6) (Same as Women’s Studies 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. Film and Social Change. (6) Lecture/screenings, eight hours; discussion, one hour. Development of documentary style and of Activist films in relation to and as force in social development. Letter grading.

113. Film Authors. (6) Lecture/screenings, eight hours; discussion, one hour. In-depth study of specific film author (director or writer). May be repeated once for credit with consent of department and topic change. P/NP or letter grading.

113A. Film Directors: Hitchcock and His Influence. (5) Lecture/screenings, five hours; discussion, one hour. Study of selected films, as Hitchcock’s and influence, he has had on other filmmakers. Lectures and screenings of Hitchcock films in first seven weeks, with coverage of films that are closely patterned after Hitchcock’s in last three weeks. P/NP or letter grading.

113B. Film Authors: Women Filmmakers. (5) Lecture, five hours; discussion, one hour. Consideration of contributions to world cinema made by women directors, with focus on women directors working in various eras and modes of production (e.g., silent cinema, industry cinema, avant garde) with specific investigations of several auteurs, specifically Dorothy Azner, Jane Campion, and Cheryl Dunye. 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 cycle, musical, silent epic, comedy, social realism). May be repeated once for credit with consent of department and topic change. P/NP or letter grading.

115. Stylistic Approaches for Moving Image: Theory and Practice. (6) Lecture, four hours; discussion, one hour. Survey of major directors and movements to examine dynamics of cultural constructions and visual thinking, including narrative, narrative, and story structure. Letter grading.

116. Film Criticism. (4) Lecture, four hours; laboratory, to be arranged. Study of and practice in film criticism. P/NP or letter grading.

M117. Chicanos in Film/Video. (5) (Same as Chicano and Chicana 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. Examining 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, Bakers Dozen, 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.


125. Acting for Film and Television. (4) Studio, six hours. Project(s) in film and video acting. May be repeated twice for credit. P/NP or letter grading.

126. Media and Ethnicity. (4) Lecture, four hours. Utilization of media as tool for social impact and uses of media on contemporary American ethnic communities. Role and techniques of media influence besides community utilization and production. 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 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 CM229. P/NP or letter grading.

C132. Screenwriting Fundamentals. (2) Formerly numbered 128A. Lecture, one hour. Corequisite for graduate students enrolled in course 431. Not open for credit to students with credit for course 133 (or former course 130B). 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.

133. In-Depth Introduction to Fundamentals of Screenwriting. (4) (Formerly numbered 130B) Lecture, one hour; discussion, one hour. Not open for credit to students with credit for former course 130B or 135B. Structural analysis of films and development of professional screenwriters’ vocabulary for constructing, deconstructing, and reconstructing their own work. Screenings of selected films and selected film sequences in class and by assignment.

134. Intermediate Screenwriting Workshop. (4) (Formerly numbered 130C) Seminar, three hours. Problems in film and television writing. P/NP or letter grading.

135A-135B-135C. Advanced Screenwriting Workshops. (8-8-8) Laboratory, three hours. Concurrently scheduled with course CM229. P/NP or letter grading.

C142. Digital Imagery and Visualization. (4) Lecture, three hours; laboratory, three hours. Introduction to and hands-on investigation of techniques of digital still imaging and aesthetics of digital image, in context of examining dynamics of cultural constructions and visual thinking, including narrative, narrative, and story structure. 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. May be repeated twice for credit. 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 individual interactive multimedia projects. May be repeated once for credit. Concurrently scheduled with course C244. Letter grading.

gy, and sociopolitical consequences. May be repeated once for credit. Concurrently scheduled with course C245. Letter grading.

146. 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 artistic and economic aspects of production in industrial context, both independent and studio. Screenings viewed outside of class and on reserve at Powell Library. Letter grading.


C148. Advanced Digital Media Workgroup. (4) Discussion, four hours; laboratory, two hours. Designed for students with previous laboratory course experience, course provides opportunity to create large-scale digital media works with advanced software tools and techniques in small process-oriented, creative workshop environment. May be repeated once for credit. Concurrently scheduled with course C248. Letter grading.

C149A-C149B. Music in Film: Another Way to Tell Stories. (4 lecture/4 lab hours. Course C149A is requisite to course C149B. Exploration of concepts and issues that drive creation and use of music in film. Through lecture/discussion and practical assignments, examination of the relationship between filmmaker and composer. Viewing of noteworthy examples and following of collaboration of filmmakers with composers, with weekly sessions dedicated to temping, creation and development of new scores, studio visits, and creative/conceptual dialogue between musician and filmmaker. Preparation of film ready for temping by end of first term and ready for scoring at beginning of second term. Concurrently scheduled with courses C455A-C455B. Letter grading.

150. Cinematography. (4) Lecture, three hours; laboratory, three hours. Requisites: courses 100, 185. Limited to Film and Television majors. Introduction to image control in motion picture photography through exposure, lighting, and selection of film, camera, and lens. Supervised projects in photography to complement material covered in lecture. 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 film (no more than three minutes) using 16mm nonsync 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 practices of film and television sound recording, including supervised exercises. P/NP or letter grading.

C152C. Digital Audio Postproduction. (4) Lecture, three hours; laboratory, three hours. Limited to department 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 step-by-step, with emphasis on creative process. Concurrently scheduled with course C452C. Letter grading.

153. Motion Picture Lighting. (4) Lecture, three hours; laboratory; three hours. Requisites: courses 100, 150, 185. Limited to Film and Television majors. Introduction to principles and tools of lighting used in visual storytelling through lectures, discussions, 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, to be arranged. Requisites: courses 100, 185. 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. Concurrently scheduled with course C154B. 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. Requisites: courses 100, 154, 185. Limited to Film and Television majors. 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, six hours; laboratory, one hour. Requisites: courses 100, 185. Limited to Film and Television majors. Instruction and exercises in basic concepts and software of virtual production environments and digital postproduction tools. Letter grading.

163. Directing Cameras. (4) Laboratory, eight hours. Requisites: courses 100, 185. Limited to Film and Television majors. Investigation of expressive potential of image within and beyond narrative from directorial perspective. Experiments with working methodologies that stimulate visual creativity and positioning image as fundamental element of cinematic expression. Letter grading.

164. Directing Actors. (4) Laboratory, four hours. Excursions in analysis of script and character and purpose of directing actors. Emphasis on eliciting best possible performance from actors. May be repeated twice for credit. P/NP or letter grading.

165. Advanced Narrative Television Directing. (4) Laboratory, six hours; laboratory, three hours; fieldwork, four to six hours. Limited to Film and Television majors. Supervised excursions in television multicamera direction, with emphasis on creative use of cameras, sound, composition, and communication with those in front of and behind camera. May be repeated twice for credit. 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, directing, and cinematography in various real-life practical locations. Practical application of solving problems and communication within limitations of production experience. Concurrently scheduled with course C468. Letter grading.

C170A. Introduction to Digital Effects. (4) Lecture, three hours; laboratory, to be arranged. Introductory study of digital effects production, with specific focus on motion graphics, compositing, effects processing, and title sequences. Concurrently scheduled with course C470A. Letter grading.

175A-175B. Undergraduate Film Production. (8 to 10) Requisites: courses 100, 185. Limited to Film and Television majors. P/NP or letter grading. 175A. Lecture, four hours; laboratory, eight hours. Writing, preproduction, and production for short film. 175B. Lecture, three hours; laboratory, eight hours. Completion of postproduction (editing, creation of sound tracks) for short film begun in course 175A. 175A-175B. Advanced Undergraduate Video Production (8 to 8) Discussion, three hours; laboratory, to be arranged. Requisite: course 185. Limited to Film and Television majors. Instruction and production of video production (no more than 20 minutes), including its writing, production, and editing. Letter grading.

M177. Film and Television Acting Workshop. (2) (Same as Theater M178.) Lecture, six hours; laboratory. Preparation and instruction in four-hour video documentaries. Completion of series of exercises from conceptualization through postproduction, culminating in production of short documentary. Letter grading.

186A. Introduction to Documentary Production. (4) (Formerly numbered 186B.) Lecture, three hours; laboratory, three hours; fieldwork, four to six hours. Requisites: course 186A, which is requisite to 186C. Limited to Film and Television majors. Introductory 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.

186B. Intermediate Documentary Production Workshop. (4) Lecture, three hours; laboratory, three hours; fieldwork, four to six hours. Requisite: course 186A. Limited to Film and Television majors. Intermediate 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.

186C. Advanced Documentary Production Workshop. (4) Lecture, three hours; laboratory, three hours; fieldwork, four to six hours. Requisites: courses 186A and 186B. Limited to Film and Television majors. 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.

181B-187B-187C. Producing and Directing Remote Multicamera Production. (4-6-6) Lecture/laboratory, three hours (additional hours to be arranged). Letter grading. 187A. Professionally oriented lecture/laboratory. Directed workshop course to provide disciplined planning, responsible leadership, and organizational and problem-solving skills required in deadline remote production. Emphasis on clarity of vision, story telling, effective execution of pitch, preproduction, shoot, and editorial. 187B-187C. Instruction and su-
perceived productions of remote experience, with focus on development and execution of concept. Experience closely patterned after professional experience and working with talent, production venues, and production logistics of remote on-location video programs.

188A. Special Courses in Film, Television, and Digital Media. (4) Lecture, three hours; discussion, one hour. Special topics in film, television, and digital media for undergraduate students taught on experimental or temporary basis. May be repeated for credit. P/NP or letter grading.

188B. Introduction to Art and Technique of Filmmaking. (4) Lecture, four hours; discussion, one hour. Students acquire understanding of practical and aesthetic challenges undertaken by artists and professionals in making of moving picture 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 some ways it can operate. Letter grading.

188C. Design and Experimental Digital Film Production. (4) Lecture, three hours; discussion, one hour. Students conceive, write, polish, shoot, and edit short experimental or documentary projects. Experimentation with image, sound, and montage; examination of scenes from feature films and experimental short subjects. By end of term, students complete a short film or series of shorts with titles and sound track. P/NP or letter grading.

188D. Film Editing: Overview of History, Technique, and Practice. (4) Lecture, three hours. Practical application of film editing techniques, how 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.

188E. Digital Cinematography. (4) Lecture, three hours; discussion, one hour. Thorough film industry from late 1990s to present. Multifaceted industry with interrelated organizational, technological, demographic, narrative, ideological, and aesthetic foundations. Hollywood industry model versus independent model by contradictory forces of stability and change, continuity, and innovation. Examination of emergence of new paradigms of the changing industry and distribution, styles, and modes of address as they are developed by new generation of filmmakers and targeted at new kinds of audiences that are increasingly younger and more global, as illustrated by Hollywood's new star directors: David Fincher, Steven Soderbergh, Paul Thomas Anderson, Quentin Tarantino, Alexander Payne, Wes Anderson, George Clooney, Sofia Coppola, and others. P/NP or letter grading.

188F. Hollywood Now! (6) Lecture and screenings, eight hours; discussion, one hour. Hollywood film industry from late 1990s to present. Multifaceted industry with interrelated organizational, technological, demographic, narrative, ideological, and aesthetic foundations. Hollywood industry model versus independent model by contradictory forces of stability and change, continuity, and innovation. Examination of emergence of new paradigms of the changing industry and distribution, styles, and modes of address as they are developed by new generation of filmmakers and targeted at new kinds of audiences that are increasingly younger and more global, as illustrated by Hollywood's new star directors: David Fincher, Steven Soderbergh, Paul Thomas Anderson, Quentin Tarantino, Alexander Payne, Wes Anderson, George Clooney, Sofia Coppola, and others. P/NP or letter grading.

188G. Asian Action Films. (6) Lecture and screenings, eight hours; discussion, one hour. Historical, cultural, and critical survey of action film genre from Hong Kong, Taiwan, Japan, and South Korea. Recent global popularity of Hong Kong action films created new genre that combines themes of American action film, emphasizing spectacle over narrative, with philosophies and action styles of Eastern Asian cultures that produce these films. Exploration of circulation of national-popular traditions within international contexts. Study of more enduring, exciting subgenres and national specialties of genre that has dominated cinematic production and achieved success beyond Asia, including kung fu and other martial arts films, yakuza or gangster films, and flying swordman films. How gender and race shape action narratives, as illustrated by Bruce Lee, Jackie Chan, and Michelle Yeoh. Examination of issues of industry and authorship, and producers/directors such as Shaw Brothers, Seijun Suzuki, Tsui Hark, King Hu, and John Woo.

188I. Writing for Animation Series. (5) Lecture, three hours. Introduction to craft and business of writing animation for television. Overview of history of animation produced specifically for this medium, along with its many varying models. Model has evolved radically over past five decades, as have types of shows that have been created. Designed to put shows in historical perspective, with eye toward where industry is going, and challenges in technology and continuing (and growing) scrutiny of outside forces such as corporations and FCC. Letter grading.

188J. Disney Feature: Then and Now. (5) Lecture, three hours; discussion, three hours. Study and analysis of Disney's animated features. Evaluation of why Disney's animated features have dominated until recently and ramifications of this dominance on animation and society. Letter grading.

188K. Visual Effects. (4) Lecture, three hours. Nearly every film employs some form of visual effects, whether in reconstructing backdrop of history, creating futuristic or fantasy world, or simply fixing weather or production problems. Discussion of evolution of visual effects, as well as problems and blessings inherent in constantly evolving technology. Top visual effects consultancies and challenges of current and past grading.

188M. Film and Television Directing. (4) Lecture, two hours. Through discussions, screenings, demonstrations, and guest lectures, students develop understanding of narrative, visual, and aural storytelling in both short films and television. Letter grading.

188N. History of Animation in American Film and Television. (5) Lecture, six hours. Survey of art of animation in America from its precursors to origins to recent films of Disney, Pixar, DreamWorks, GHIL, and others. Place of animation in pop culture, racial imagery and ethnic stereotypes, growth of art form, and how it reflects American cultural values. Letter grading.

193A. Film Curatorship. (4) Lecture, two hours; discussion, two hours; laboratory, four hours. Study of principles and techniques of film curatorship and research, including but not limited to acquisitions, cataloging, storage, and retrieval systems. Special attention to application of new technology, equipment, and program materials to film archival-library design for research and teaching. P/NP or letter grading.

193B. Television Archival. (4) Lecture, two hours; discussion, two hours; laboratory, four hours. Study of principles and techniques of television curatorial and research, including but not limited to acquisition, cataloging, storage, retrieval systems. Special attention to application of new technology, equipment, and program materials to television archival-library design for research and teaching. P/NP or letter grading.

194. Internship Seminars: Film, Television, and Digital Media. (2 to 6) Seminar, three hours; laboratory, three hours. Preparations of individual original research projects in film and/or television history and analysis designed to be presented atFilm/DVD viewing. May be repeated for credit. Semester credit only. P/NP or letter grading.

195. Corporate Internships in Film, Television, and Digital Media. (2 to 6) Tutorial, two hours; fieldwork, 14 or 20 hours. Corequisite: course 195. Open to juniors/seniors who are interning in film or television industry and to nonmajors. Nonmajors must complete application in Internship Office, 203 East Melnitz Building, to be considered. Consideration of contemporary industry issues and practices. May be repeated for credit. P/NP or letter grading.

195. Corporate Internships in Film, Television, and Digital Media. (2 to 6) Tutorial, two hours; fieldwork, 14 or 20 hours. Corequisite: course 195. Open to juniors/seniors who are interning in film or television industry and to nonmajors. Nonmajors must complete application in Internship Office, 203 East Melnitz Building, to be considered. Corporate internship in supervised setting in business related to film and television industry and to nonmajors. Supervised individual research or investigation under guidance of faculty mentor. Cumulating paper or project required. May be taken for maximum of 8 units. Individual contract required. P/NP or letter grading.

Graduate Courses

200. Seminar: Bibliography and Methods of Research in Film and Television. (6) Seminar, three hours; laboratory, four to six hours (additional screenings and/or video laboratory 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 and retrieval and, when appropriate, use of computer/video/disc technology for research. Letter grading.

201. Seminar: Media Industries and Cultures of Production. (6) Seminar, three hours; film screenings, three hours. Theory and method in study of media industries, with focus on cultures of production (production world as cultural form). Investigation of ways production practice itself is sociological, institutional, cultural, and critical practice. Letter grading.

202. Seminar: Media Audiences and Cultures of Consumption. (6) Seminar, three hours; film screenings, three hours. Critical study of the role of television and electronic media and examination of theoretical approaches to culture and audience research. Consideration of issues of cultural taste, consumption, style/lifestyle, identity, and relationships between audience, industry, and mass-marketed images/commodities. Letter grading.

203. Seminar: Film and Other Arts. (6) Seminar, three hours; film screenings, four to six hours. Designed for graduate students. Study of 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 analysis), using DVD accessing 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.

205. Seminar: DVD for Film History and Analysis. (6) Seminar, three hours; laboratory, three hours. Preparation of individual original research projects in film and/or television history and analysis designed to be presented at Film/DVD viewing. May be repeated for credit. Semester credit only. P/NP or letter grading.

206A. Seminar: European Film History. (6) Seminar, three hours; film screenings, four to six hours. Requisite: course 106B. Designed for graduate students. Studies in selected historical movements such as expressionism, socialist realism, surrealism, neo-realism, New Wave, etc. May be repeated twice for credit. S/U or letter grading.

206B. Seminar: Selected Topics in Film History. (6) Seminar, three hours; laboratory, three hours. Preparation of individual original research projects in film and/or television history and analysis designed to be presented at Film/DVD viewing. May be repeated for credit. Semester credit only. P/NP or letter grading.

206C. Seminar: American Film History. (6) Seminar, three hours; film screenings, four to six hours. Preparation of individual original research projects in film and/or television history and analysis designed to be presented at Film/DVD viewing. May be repeated for credit. Semester credit only. P/NP or letter grading.

206D. Seminar: Silent Film. (6) Seminar, three hours; film screenings, four to six hours. Discussion of silent film from its beginning in 1895 to transition to sound cinema in 1927 to 1930. Film viewings discussed in 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 in 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 and advanced undergraduate students. Study of meaning and signification, 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 charactexize theoretical writings of Arneil, Eisenstein, Bazin, Kracau- er, etc. Letter grading.

208C. Seminar: Contemporary Film Theory. (6) Seminar, three hours; film screenings, four to six hours. Required course 208B. Designed for graduate students. Study of development of ideas 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.

209B. Seminar: Fictional Film. (6) Seminar, three hours; film screenings, four to six hours. Designed for graduate students. Film as fiction and its relation to contemporary culture. May be repeated once for credit. S/U or letter grading.

209D. Seminar: Animated Film. (4) Seminar, three hours; laboratory, three hours. Required for graduate students. Study of animated film: its historical development, structure, style, use, and relation to contemporary culture. S/U or letter grading.

210. Seminar: Contemporary Broadcast Media. (4) Seminar, three hours (additional hours as required). Designed for graduate students. Study of issues raised by recent developments in television and radio, commercial and public, associated with innovations in satellite, cable, and cartridge systems. S/U or letter grading.


211B. Seminar: Historiography. (4) Seminar, three hours. Limited to Film and Television Ph.D. candidates. 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.


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. Emphasis on discourse of other(s). Theorization of otherness is presented in terms of how culture enters into politics of representation and representa- tion of politics through metaphors of “difference” without opposition, “the difference without identity,” and/or “the identity without ethnocentrism.” Examina- tion of how women, national minorities, and Third World peoples have been rendered others; place of cinematic representation and decommu- nization of others is positioned vis-a-vis mainstream critical discourse. Letter grading.

219. Seminar: Film and Society. (6) Seminar, three hours; film screenings, four to six hours. Designed for graduate and advanced undergraduate students. Study of role of society in film and television and is affected by social behavior, belief, and value systems; consideration in 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. Des- ignated for graduate students. Study of ways television forms affect and are affected by social behavior, belief, and value systems, study of technological and eco- nomic aspects of medium. 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. Study 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. Study of works of such genres as Western, gangster, war, sci- ence fiction, comedy, etc. May be repeated twice for credit. S/U or letter grading.

223. Seminar: Visual Reception. (6) Seminar, three hours; film screenings, three hours. Aesthetic, psycho- logical, physiological, and phenomenological ap- proaches to television as they relate to ways in which viewers experience and see film, television, and digital media. Letter grading.

224. Computer Applications for Film Study. (6) Lecture, three hours; film screenings, three hours. Sur- vey of computer applications relevant to film study, principally computer-aided systems and image capture technology. S/U or letter grading.

225. Seminar: Videogame Theory. (6) Seminar, three hours; laboratory, three hours. Videogame theo- ry, 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 vid- eogame field. S/U or letter grading.

229. Contemporary Topics in Theater, Film, and Television. (2) Same as Theater CM229. Lecture, two hours; screenings, two hours. Limited to junior/sea- son and graduate theater/film and television students. Examination of creative process in theater, film, and television, with consideration of writing, direction, pro- duction, and performance. Overview of individual con- tributions in collaborative effort; examination of distinct- liveness and interrelations among these arts. Individu- al units include participation of leading members of theater, film, and television students. May be re- peated twice for credit. Concurrently scheduled with course CM129. S/U or letter grading.


234. Moving Digital Image. (4) Lecture, three hours; laboratory, three hours. Investigation of different ways of conveying narratives through moving imagi- nary (digital video) on desktop computers, exploring both creative and theoretical aspects of this production en- vironment. Students conceive and produce number of short projects. Concurrently scheduled with course C142. Letter grading.


248. Advanced Digital Media Workshop. (4) Dis- cussion, four hours; laboratory, two hours. Designed for students with previous laboratory course experi- ence. Course provides opportunity to create larger-scale digital media projects. Emphasis on advanced techniques and tools in small process-oriented, creative workshop environment. May be repeated once for credit. Concurrently scheduled with course C148. Let- ter grading.

249. Digital Revolution. (4) Lecture, four hours; dis- cussion, one hour; laboratory, one hour. Comprehen- sive survey to introduce students to emerging digital technologies, result in new media, and their artistic, economic, and social implications. Topics include digi- tal editing, digital previsualization, multimedia, World Wide Web, interactive television, and virtual reality. 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. Des- ignated 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 Critics. (6) Seminar, three hours; laboratory, four hours. Limited to Film and Tele- vision Ph.D. candidates. Study and practice of analytic and critical response, with emphasis on contemporary film and television. S/U or letter grading.


276. Seminar: Non-Western Films. (4) Seminar, three hours (additional hours as required). Designed for graduate students. Analysis of major forms of film and television production and criticism it has elicited. S/U or letter grading.


283A. Developing Comedy Series. (4) Seminar, three hours. Basic tenets of writing comedy series and contemporary industry production and business practices. Development of original show concepts and pitch for review and feedback by class, industry, and guests. Letter grading.

283B. Writing Television Comedy Scripts. (4) Semi- nar, three hours. Examination of basics of half-hour pil- lot format, style, and content and learning of principles
agreements, union agreements, music, copyright, etc., necessary to understand film and television industry. S/U or letter grading.

288B. Strategy. (4) Lecture, three hours. Course 288A is not requisite to 288B. Examination of business realities of industry, with focus on techniques for analyzing behavior, making strategic decisions, and overcoming writer-producer and producer-writer, or director. Assignments designed to assist students in articulating and achieving their goals and to help them effectively transition from classroom to their careers in entertainment industry. S/U or letter grading.

289C. Independent Spirit: Creative Strategies for Financing and Distributing Independent Features. (4) Lecture, three hours. Course 289B is not requisite to 289C. Development of independent or specialty films. Topics include film finance, production, marketing, distribution, agents, and new technology, with emphasis on applying this knowledge to individual student 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 luminaries. 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.

290B. Research and Development II. (4) Seminar, three hours. Forum for roundtable 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 selected project. Requirements include industry-related book reports, script analysis, pitching selected concept, weekly research to understand marketplace, accumulation and updating of data, and justifying project in terms of feasibility referred to illuminate potential consequences of each transaction. Negotiation strategy exercises. S/ U or letter grading.

291A. Studios versus Independents: Navigation Process. (4) Lecture, three hours. Tools necessary for producer to navigate Hollywood entertainment industry. Topics discussed through lectures and guest speakers include impact of difficulty to navigate relationships between art and commerce in craft of filmmaking, rapid advance of new technologies, diverse new means for producing films to be presented for review by class and instructor to begin identifying potential thesis projects. S/U or letter grading.

291B. Feature Film Marketing. (4) Lecture, three hours. Three-hour course. Course 291A is requisite to 291B. Examination of various industry professionals. S/U or letter grading.

291C. Feature Film Distribution and Exhibition. (4) Lecture, three hours. Course 291B is requisite to 291C. Investigation of philosophy, structure, and major players that make up entertainment industry, with emphasis on film distribution and exhibition. Through lectures, readings, and guest speakers, exploration of interrelated arenas of production, marketing, business affairs, media, and impact of international market on distribution and exhibition of studio releases. 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. Examination of role of showrunner, executives from networks and production companies, packaging agents, and studio responsibilities for developing and promoting projects. S/U or letter grading.

292B. Who Produces Television? Showrunner, Nonwriting Producer, and Executive, or Agent? (4) Lecture, three hours. Course 292A is not requisite to 292B. Three-hour course. To help producers, as well as screenwriters and directors, focus on networking opportunities and to develop strategies to bring their feature and television projects to marketplace. Study case documents (scripts) from current or recently produced projects provided. S/U or letter grading.

293C. Running Shows: Producing for Broadcast and Cable. (4) Lecture, three hours. Course 292B is not requisite to 293C. Exploration of role of writers-producers or showrunners in creating television shows. Development of story ideas, presentation of writer-producers' or showrunners' work to networks and production companies, packaging agents, and 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. Survey of range of contracts involved in studio productions, including literary submission and option agreements, artist employment, director employment, writer collaboration agreements, coproduction agreements, music agreements, music rights, exposure to a range of industry professionals. 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. Students will write and deliver 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 for Producers. (4) Lecture, three hours. Course 295A is not requisite to 295B. Designed to help producers, as well as screenwriters and directors, focus on networking opportunities and to develop strategies to bring their feature and television projects to marketplace. S/U or letter grading.

296A. Role of Talent Agencies. (4) Lecture, three hours. To help producers, as well as screenwriters and directors, focus on networking opportunities and to develop strategies to bring their feature and television projects to marketplace. S/U or letter grading.
and detail of legal rights and responsibilities of each. Exercises require students to represent rights holders in series of 33-hour lawsuits. Requisites: courses 417, 418. Limited to graduate film and television students. Advanced study of principles of cinematography, with emphasis on exposure, lightin, and selection of film, camera, and lenses. Concurrently scheduled with course C118. Letter grading.

417. Lighting for Film and Television. (4) Lecture, two hours; laboratory, six hours. Limited to graduate film and television students. Students conceptualize, research, write, shoot, and edit projects to completion. May be repeated twice for credit. Letter grading.

418. Cinematography and Directing. (4) Lecture, two hours; discussion, one hour; laboratory, one hour. Requisites: courses 417, 418. Limited to graduate film and television students. Supervised filming of short dramatic projects on sound stage and at locations that explore complexity of process, emphasizing balance and collaboration essential to both directing and photography 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.


423A. Direction of Actors for Film and Television. (4) Lecture, four hours; laboratory. Preparation: first film project. Limited to graduate film and television students. Required of all production majors shooting fiction productions. Exercises in analysis of script and character development. One-hour course, 6 to 12 weeks of practical experience. Letter grading.

423B. Advanced Direction of Actors for Film and Television. (4) Studio laboratory, six hours. Requisite: course 423A. Limited to graduate film and television students. Advanced study and practice of directing actors before camera. Emphasis on developing technicalities to immediately enhance communication between director and actor on set in order to maintain continuity from shot to shot. S/U or letter grading.


431. Introduction to Film and Television Screenwriting. (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.


C146. Intermediate Cinematography. (4) Lecture, two hours; laboratory, four hours. Requisites: courses 100, 150, 185. Intermediate study of principles of cinematography, with emphasis on exposure, lighting, and selection of film, camera, and lenses. Concurrently scheduled with course C118. 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 or letter grading.

400. Film Image Design Laboratory. (4) Lecture, two hours; laboratory, six hours. Limited to graduate film and television students. Conception and design of non-narrative forms. Unifying theory and practice, presentation of approach to viewing great films of past that empowers filmmakers to use their own personal style for telling stories on screen. Letter grading.

402A. Lecture, six hours; laboratory, six hours. Limited to graduate film and television students. Production of 10- to 15-minute fic- tion film of one section. Production of short documentary. Requisites: courses 408A, 408B. Limited to graduate film and television students. Production of 10- to 15-minute fiction film or experimental film, video, or multimedia project. Production of advanced individual documentary film or video projects. S/U or letter grading.

435. Advanced Writing for Short Film and Television Screenplays. (4) Discussion, three hours. Requisite: course 50C. Limited to graduate film and television students. Conception, development, and writing of dramatic film script to be produced as advanced or thesis project. Letter grading.

437. Nontheatrical Writing for Film and Television. (4) Discussion, three hours. Limited to graduate film and television students. Advanced study and practice of techniques and skills of in-depth research and presentation. Writing of film and television essays, with emphasis on research and preproduction. May be repeated for maximum of 16 units. S/U or letter grading.

451. Advanced Design for Film and Television. (4) Laboratory, to be arranged. Limited to graduate film and television students. Advanced study and practice of techniques and skills of design for motion pictures and television. Art direction for advanced workshop production. May be repeated for maximum of 12 units. S/U or letter grading.

452A. Film and Television Sound Recording. (4) Lecture, three hours; laboratory, four hours. Limited to graduate film and television students. Principles and practices of film and television sound recording, including supervised exercises. S/U or letter grading.

462B. Advanced Film Workshop. (4) Lecture, four hours; studio, eight hours. Supervised exercises in studio music recording techniques, with emphasis on special requirements for motion pictures and television. S/U or letter grading.

C452C. Digital Audio Postproduction. (4) Formerly numbered 452C. Lecture, three hours; laboratory, three hours. Limited to departmental 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 step-by-step, with emphasis on creative process. Concurrently scheduled with course C452A. Letter grading.

453. Postproduction Sound Design. (2 to 4) Lecture, three hours. Designed to give film students insight into world of postproduction sound and to provide knowledge and experience for future work in their projects. Exploration of all areas of postproduction sound design from editing to final mixing. How to effectively use sound design to enhance storytelling capability of films, evaluate music choices, pick composer, music edit, create sound design to enhance story points, discover design opportunities, and select right sound effects. How to edit dialogue, prep for Automatic Dialogue Replacement, and Foley sessions, supervise final sound mix. Screening of numerous film clips to provide examples of postsound choices that demonstrate effective use of sound design. S/U or letter grading.

454A. Advanced Film Editing. (4) Lecture, three hours; laboratory, to be arranged. Preparation: submission of rough cut and/or copy of screenplay. Limited to film and television students in postproduction phase of thesis or advanced project. Organization and operation of postproduction process. Letter grading.

C454B. 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. Requisites: courses 100, 154, 185. Limited to film and television students 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 C154B. Letter grading.

454C. Advanced Film Editing: Postproduction Pathways. (2 to 4) Lecture, three hours; laboratory, two hours. Limited to departmental majors. Through discussions, demonstrations, outside speakers, and laboratory assignments, demystification of ever-changing world of postproduction. Students plan, schedule, and budget their postproduction pathway in preproduction. May be repeated for credit. Letter grading.

C455A-C455B. Music in Film: Another Way to Tell Stories. (4-4) Lecture, three hours. Course C455A is requisite to C455B. Exploration of concepts and issues that drive creation and use of music in film. This lecture/discussion and practical assignments, examination of deep collaboration between filmmaker and composer. Viewing of noteworthy examples and following in-class film screenings, optional weekly sessions dedicated to temping, creation and development of new scores, studio visits, and creative/ conceptual dialogue between musician and filmmaker. Preparing students for postproduction with an emphasis on the postproduction process, with an emphasis by end of first term and ready for scoring at beginning of second term. Concurrently scheduled with courses C149A-C149B. Letter grading.

459A-459B. Directing for Film and Television. (4-4) Lecture, three hours; laboratory, to be arranged. Directed to graduate film and television students. Analysis and exploration, with specific scenes, of differences and many similarities in directorial approach to same literary material in theater, film, and television. Letter grading.


C468. Creative Location Film Production. (8) Lecture, four hours; discussion, four hours; laboratory, to be arranged. Directed to limited or producer's program students. Problems of location, production, direction, and design, with emphasis on practical locations. Practical application of solving problems and communication within limitations of production experience. Concurrency scheduled with course C168B. Letter grading.

C470A. Introduction to Digital Effects. (4) Lecture, three hours; laboratory, to be arranged. Introductory study of digital effects production, with specific focus on motion graphics, compositing, effects processing, and title sequences. Concurrently scheduled with course C170A. Letter grading.

472. Commercials. (4) Lecture, four hours. Limited to M.F.A. 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 and European markets to work within distinct confines of commercial genre. Letter grading.

475. Film I. (8) Discussion, three hours; laboratory, to be arranged. Designed for graduate students. Study of basic techniques of television and video production, including completion of one or more projects. S/U or letter grading.

476. Video I. (8) Discussion, three hours; laboratory, to be arranged. Designed for graduate students. Study of basic techniques of television and video production, including completion of one or more projects. S/U or letter grading.

478. Video II. (8) Discussion, three hours; studio, to be arranged. Requisites: courses 185, and 405 or 476. Designed for graduate students. Group experience in video production with each member rotating on crew work in production of individual or collective projects. S/U or letter grading.

480. Timing for Animation. (4) Lecture, three hours; laboratory, three hours. Process of animation timing through lectures and assignments. Letter grading.

482A-482B. Advanced Animation Workshops. (4 or 8 each) Lecture, three hours; studio, to be arranged. Requisites: courses 181A, 181C, 482A. Advanced organization and integration of various creative arts used in animation, resulting 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. Concurrently scheduled with 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. Concurrently scheduled with course 181B. Course 484A is requisite to 484B. Systematic approach to analyzing and communicating two-dimensional 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, competition rights, employer/employee relationships, and representation in animation. S/U or letter grading.

486. Directed Individual Study: Preparation to Advance to Candidacy for M.F.A. in Production. (2 to 4) Tutorial, four to eight hours. Limited to M.F.A. production program students. Specialized development and organization of proposed thesis project prior to advancement to candidacy. Should be taken before student plans to advance to candidacy. S/U or 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 animation to form completed project of selected interactive topic. 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; direction, four to eight hours. Concurrently scheduled with course 181B. Designed 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, and development of skills in dealing with students and associates in critical studies program. Orien-

495B. Teaching with Technology in Film and Media Studies. (2) Seminar, three hours. How to use appropriate technology to become more effective teaching assistants. Pedagogical impact of tools, including course management software, presentation technolo-
gies, and Internet. Discussion of technological resources available on campus. Use of unfamiliar tools to gain confidence in ability to incorporate new technologies in teaching. 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.
**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.

### Foreign Literature in Translation

#### Course List

**Afrikaans (Germanic Languages)**
- 40. From Oppressed to Oppressor and Beyond: Literature in Afrikaans from Prepartheid to Postapartheid Era in English Translation

**Ancient Near East (Near Eastern Languages)**
- 150A-150B-150C. Survey of Ancient Near Eastern Literatures in English

**Arabic (Near Eastern Languages)**
- 150. Classical Arabic Literature in English
- 151. Modern Arabic Literature in English

**Armenian (Near Eastern Languages)**
- 150A-150B. Survey of Armenian Literature in English
- 152. Modern Armenian Drama as Vehicle for Social Critique

**Asian (Asian Languages)**
- 151. Buddhist Literature in Translation

**Central and East European Studies (Slavic Languages)**
- 126. Coldwar Central European Culture

**Chinese (Asian Languages)**
- 150A. Lyrical Traditions

**Classics**
- 40W. Reading Greek Literature: Writing-Intensive
- 41W. Reading Roman Literature: Writing-Intensive

**Comparative Literature**
- All undergraduate courses

**Czech (Slavic Languages)**
- 155. Survey of Czech Literature from Middle Ages to Present

**Dutch (Germanic Languages)**
- 10. Contemporary Dutch Society and Culture: Beyond Rembrandt, Cheese, and Wooden Shoes
- 113. Modern Dutch and Flemish Literature in Translation

**English**
- 111A. Hebrew Bible in Translation
- 111B. Christian Biblical Texts in Translation

**French (French and Francophone Studies)**
- 112. Medieval Foundations of European Civilization
- 160. Francophone Cultures in English

**German (Germanic Languages)**
- 50A-50B. Great Works of German Literature in Translation

**Italian**
- 42A-42B. Italy through Ages in English
- 50A-50B. Masterpieces of Italian Literature in English

**Japanese (Asian Languages)**
- 150A-150B. Survey of Japanese Literature in Translation

**Korean (Asian Languages)**
- 150. Korean Literature in Translation: Classical

**Modern Polish Literature**
- 152A-152B-152C. Survey of Polish Literature

**Portuguese (Spanish and Portuguese)**
- 40A-40B. Portuguese, Brazilian, and African Literature in Translation

**Russian (Slavic Languages)**
- 150A-150B. Russian Literature in Translation

**Scandinavian (Germanic Languages)**
- 150A-150B-150C. Danish, Norwegian, and Swedish Literature in Translation

**Spanish (Spanish and Portuguese)**
- 50A-50B. Spanish Literature in Translation
- 150A-150B. Spanish Literature in Translation

**Turkish (Slavic Languages)**
- 150A-150B. Turkish Literature in Translation

**Welsh (British and Irish Languages)**
- 150A-150B. Welsh Literature in Translation

**Yiddish (Germanic Languages)**
- 150A-150B. Yiddish Literature in Translation

**Greek (Greekic Languages)**
- 150A-150B. Greek Literature in Translation

**Hebrew (Hebrewic Languages)**
- 150A-150B. Hebrew Literature in English

**Armenian (Near Eastern Languages)**
- 150A-150B. Survey of Armenian Literature in English

**Austrian (Germanic Languages)**
- 150A-150B. Austrian Literature in English

**Belgian (Frenchic Languages)**
- 150A-150B. Belgian Literature in English

**Hungarian (Slavic Languages)**
- 150A-150B. Hungarian Literature in Translation

**Irish (British and Irish Languages)**
- 150A-150B. Irish Literature in Translation

**Italian (Italianic Languages)**
- 150A-150B. Italian Literature in Translation

**Russian (Russianic Languages)**
- 150A-150B. Russian Literature in Translation

**Scandinavian (Scandinavianic Languages)**
- 150A-150B. Scandinavian Literature in Translation

**Turkish (Turkishic Languages)**
- 150A-150B. Turkish Literature in Translation

**Yiddish (Yiddishic Languages)**
- 150A-150B. Yiddish Literature in Translation

**Zulu (Bantu Languages)**
- 150A-150B. Zulu Literature in Translation

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**348 / Foreign Literature in Translation**
FRENCH AND FRANCOPHONE STUDIES

College of Letters and Science

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Professors
Jean-Claude Carron, Docteur ès Lettres
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Eric L. Gans, Ph.D.
Lynn A. Hunt, Ph.D. (Eugen Weber Professor of Modern European History)
Eleanor K. Kaufman, Ph.D.
Efren Kristal, Ph.D.
Françoise Lionnet, Ph.D.
Alix M. Mabanckou, D.E.A.
Allen F. Roberts, Ph.D.
Malina Stefanovska, Ph.D.
Dominic R. Thomas, Ph.D.
Stephen D. Werner, Ph.D.

Associate Professors
Andrea N. Loselle, Ph.D.
Sara E. Melzer, Ph.D.
Laure Murat, Doctorat en Histoire
Zrinka Stahuljak, Ph.D.

Assistant Professor
Lia N. Brozgal, Ph.D.

Senior Lecturer
Kimberly Jansma, Ph.D.

Lecturer
Laurence M. Denié-Higney, Ph.D.

Eleanor K. Kaufman, Ph.D.

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 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 M.A. and Ph.D. 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.

French B.A.

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 at http://www.admissions.ucla.edu/prospect/adm_tr.htm 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, 114C, and seven 4-unit courses in French and Francophone literature and/or culture selected from upper division offerings in the department in language, civilization, literature, or the arts. One upper division elective course from outside the department may be substituted in the major program with consent of the undergraduate advisor. 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, four upper division elective courses in French and Francophone studies, and four 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, with emphasis on French and Francophone culture, is a core program in French allowing for individual selection of relevant courses in related fields such as humanities, social sciences, women's studies, and linguistics. 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 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 8 units of course 199 may be applied toward the elective requirements 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 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 consult the undergraduate adviser before enrolling in upper division courses.

French and Linguistics B.A.

Preparation for the Major

Required: French 1, 2, 3, 4, 5, 6, 12, or equivalent, Linguistics 20, completion of the sixth term of one other foreign language or the third term in each of two other foreign languages. 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 at http://www.admissions.ucla.edu/prospect/adm_tr.htm 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 8 units of course 199 may be applied toward the elective requirements 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 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 198 where they receive regular personal supervision from a faculty member in the research methodology, and writing of their approximately 30- to 35-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.

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, http://www.gdnet.ucla.edu/gasaa/library/pgmrqintro.htm. 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 (M.A.), Candidate in Philosophy (C.Phil.), and Doctor of Philosophy (Ph.D.) degrees in French and Francophone Studies.

French

Lower Division Courses

1. Elementary French. (4) Lecture, five hours. P/NP or letter grading.
2. 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.

Other courses may substitute for those courses in grammar and composition an equivalent number of upper division courses in the French and Francophone Studies Department.
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.


5. Intermediate French. (4) Lecture, four hours. Enforced requisite: course 4 with grade of C— or better. P/NP or letter grading.


7. Intensive First-Year French. (12) Lecture, 15 hours. All-in-French intensive language program equivalent at 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.

8. Intensive Second-Year French. (8) Lecture, 10 hours; media laboratory, three hours. Enforced requisite: course 7. 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.


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 14-A. 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


104. Theory and Correction of Diction. (4) Formerly numbered 105.) Lecture, three hours. Enforced requisite: course 6. Study of individual sounds (vowels, consonants, and semi-vowels), including rhythm, intonation, and phrasing, and of learning sound —spelling correspondences to help sight read accurately. Thorough study of symbols of International Phonetic Alphabet (IPA) to give students tools to work on pronunciation systematically. Standard French serves as model, with examination of sounds and various dialects that are spoken in Francophone world to improve listening comprehension and pronunciation. P/NP or letter grading.


112. Medieval Foundations of European Civilization. (6) Lecture, three hours; discussion, two hours. Medieval texts, culture, social structure, and political history as they lay bases of Europe in modernity. 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 (Christien de Troyes’ Yvain), and Renaissance prose and poetry (including Marot, Du Bellay, Ronsard, Ra- belais, Marguerite de Navarre, and Maupassant). P/NP or letter grading.

114B. 17th and 18th Centuries. (5) Lecture, three hours. Requisite: course 12. Study of major works of classicism and Enlightenment, including those by Racine, Pascal, La Fayette, La Fontaine, La Rochefoucauld, Diderot, Voltaire, and Rousseau. P/NP or letter grading.


115. Studies in Medieval French Culture and Literature. (4) Lecture, three hours. Taught in French. Study of medieval French culture and literature, including lyric poetry and narrative romance, history of mediev warfare, comedy, and class structures. 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 a Pèlerin and 16th-century poetry, linguistic and poetic revolution, and poetic language, and late 17th-century 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. 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 sentimental novel, theater, philosophers, and rhetorical 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. 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-World War II literature, existentialism, and 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. Taught in French. Study of Francophone cultures and literatures, including works by poets, playwrights, and novelists from Caribbean, North Africa, Quebec, and sub-Saharan Afrika, immigrant narratives, 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 France and Francophone world (Canada, Quebec, Belgium, 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). P/NP or letter grading.


137. 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.
138. Contemporary French Theory. (4) Lecture, three hours. Requisite: course 12 or 100. Taught in French. Study of French thinkers (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 discourse. May be repeated for credit with topic change. P/NP or letter grading.

139. Paris: Study of French Capital. (4) Lecture, three hours. Requisite: course 12 or 100. Taught in French. Textual and visual exploration of historical and imaginary (re)constructions of Paris, beginning with its earliest history and gradual formation of this great urban complex in maps from Renaissance to 20th century. Study of city's streets and quarters, traffic and transportation, multiple layers of past, present, and future, and flâneurs and insurrectionists through wide range of literary and critical texts. Readings cover mainly 19th and 20th centuries — Honoré de Balzac, Chuquet Baudelaire, Emile Zola, Marcel Proust, Louis-Ferdinand Céline, and others. P/NP or letter grading.

M140. Women's Studies in French Literature. (4) (Same as Women's Studies M140.) Lecture, three hours. Exploration of views of women in French literature as author, character, symbol, etc. P/NP or letter grading.

141. French Cinema. (4) Lecture, three hours. Study of French and Francophone filmmakers in generic, thematic, and sociocultural aspects. May be repeated for credit with topic change. P/NP or letter grading.

142. Francophone Cinema. (4) 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. Francophone Culture in English. (4) Lecture, three hours. Study of Francophone cinematographers in generic, thematic, and sociocultural aspects. May be repeated for credit with topic change. P/NP or letter grading.


145. French and Francophone Theater in Translation. (4) Lecture, three hours. 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.


151. Directed Research or Senior Project in French. (2 to 4) Tutorial, three hours. Requisite: junior/senior French majors with 3.5 departmental and 3.25 overall grade-point averages. Individual contract required. P/NP or letter grading.

191A. Variable Topics Research Seminars in Translation. (4) Seminar, 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. (4) Seminar, three hours. Taught in French. 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.

198. 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 comparable theoretical project. May be repeated for credit. Individual contract required. Letter grading.

Graduate Courses


201. Techniques of Literary Analysis. (4) Lecture, three hours. Practicum in critical analysis of literary texts, including explication 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 such 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, Lacan, Lyotard, Ross, Rey Chow, Virilio. S/U or letter grading.

203. Contemporary Francophone Literature. (4) Lecture, three hours. Study of Francophone (Africa, Caribbean, Vietnamese, or Quebec literatures and cultures) with specific attention to issues of cultural contact, language, colonialism, anti-colonialism, nationalism, resistance and representation, 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 Gusdorf, Philippe Lejeune, Paul de Man, Jacques Derrida, Helene Cixous, Michel Foucault, Pierre Bourdieu, Toril Moi. S/U or letter grading.


206. Studies in History of Ideas. (4) Seminar, three hours. Particular problems in French literary and philosophical thought. 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.

M210. Paleography of Latin and Vernacular Manuscripts, 900 to 1500. (4) (Same as Classics M210, 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 when evaluating 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 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-religious text comparisons for medieval literature and culture, and to postcolonial and Francophone cultures. 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.

M270. Seminar: Literary Theory. (5) (Same as Asian M270, Comparative Literature M294, English M270, German M270, Italian M270, Scandinavian M270, and Spanish M294.) Seminar, three hours. Advanced interdisciplinary seminar to explore philosophical, historical, and theoretical foundations of literary theory as well as current issues in literary and cultural studies. S/U or letter grading.

296. Research Methods and Writing. (2) Seminar, two hours. Advanced study of research methods 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.

M299. Research Resources for European Studies. (2) (Same as German M299, Information Studies M299, Italian M299, Slavic M299, and Spanish M299.) Lecture, two hours. Essentials of library research strategy and effective searching in key print and online resources for European and Russian studies. Through combination of lecture, online demonstration, and hands-on activities in and outside class, students understand how to efficiently use library and databases. S/U or letter grading.

370. Teaching French in Secondary School. (4) Lecture, three hours; discussion, one hour. Required of all candidates for general secondary instructional credentials in French. Preparation for regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.
Freshman General Education Clusters

College of Letters and Science

UCLA
A265 Murphy Hall
Box 951571
Los Angeles, CA 90095-1571
(310) 794-5040
http://www.college.ucla.edu/ge/clusters/

M. Gregory Kendrick, Ph.D., Director

Faculty Committee
Joel D. Aberbach, Ph.D. (Political Science, Public Policy)
JoAnn Damron-Rodriguez, Ph.D. (Social Welfare)
Frank Tobias Higbee, Ph.D. (History)
M. Gregory Kendrick, Ph.D. (History)
Mark R. Morris, Ph.D. (Physics and Astronomy)
Joseph F. Nagy, Ph.D. (English)
Janice L. Reiff, Ph.D. (History, Statistics)
Abigail C. Saguy, Ph.D. (Sociology)
Brenda Stevenson, Ph.D. (History)
Keith D. Stolzenbach, Ph.D. (Civil and Environmental Engineering, Institute of the Environment and Sustainability)

Matthew Norton Wise, Ph.D. (Center for Society and Genetics, History)

Scope and Objectives

Available to entering freshmen only, cluster courses are an option for satisfying general education requirements. Clusters are yearlong, collaboratively taught, interdisciplinary courses that focus on a topic of timely importance, such as the global environment or interracial dynamics. The courses are taught by some of UCLA’s most distinguished faculty members and seasoned graduate students. During Fall and Winter Quarters, students attend lecture courses and small discussion sections and/or laboratories. In Spring Quarter, the same students enroll in one of a number of satellite seminars dealing with topics related to the cluster theme.

Freshman clusters are designed to strengthen the writing, quantitative reasoning, critical thinking, and information literacy skills that students need to excel at UCLA. At the conclusion of the entire yearlong cluster, students complete over a third of their general education course requirements and fulfill the Writing II requirement. Cluster students are eligible for three terms of honors credit, with the Spring Quarter seminar providing Honors Collegium credit.

For the current cluster course offerings and general education credit, refer to http://www.college.ucla.edu/ge/clusters/.

General Education Clusters

Lower Division Courses

M1A-M1B-M1CW. Global Environment. (6-6-6) (Same as Environment M1A-M1B-M1CW). Course M1A is enforced requisite to M1B, which is enforced requisite to M1CW. Limited to first-year freshmen. Letter grading. M24A-M24B-M24CW. Work, Labor, and Social Justice in U.S. (6-6-6) (Same as Labor and Workplace 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-M24B. 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. M24CW. Special Topics. Seminar, three hours. Enforced requisite: course M24B. Topics include labor law/history, gender, race, and workplace. Satisfies Writing II requirement.

25A-25B-25CW. Politics, Society, and Urban Culture in East Asia. (5-5-5) Course 25A is enforced requisite to 25B, which is enforced requisite to 25CW. Limited to first-year freshmen. Letter grading. 25A-25B. Lecture, three hours; discussion, two hours. Comprehensive exploration of historical evolution of popular East Asian urban culture and interrelationship of East Asian politics, social life, and economic and urban cultural expression. 25CW. Special Topics. Seminar, three hours. Enforced requisite: course 25B, and English Composition 3 or 3H or English as a Second Language 3. In-depth examination of issues in historical and contemporary East Asian popular culture. Satisfies Writing II requirement.

30A-30B-30CW. Never-Ending Stories: Multidisciplinary Perspectives. Course 30A is enforced requisite to 30B, which is enforced requisite to 30CW. Limited to first-year freshmen. Letter grading. 30A-30B. Lecture, three hours; discussion, two hours. Exploration of depth of particular mythological traditions, aspects of storytelling, 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 30B, and English Composition 3 or 3H or English as a Second Language 3. Topics may include myth and modern art (including literature, music, and film), myth and ritual, oral tradition and orality, and political ideology, myth and science, hero and trickster, and myths of creation. Satisfies Writing II requirement.

60A-60B-60CW. America in Sixties: Politics, Society, and Culture, 1954 to 1974. (6-6-6) Course 60A is enforced requisite to 60B, which is enforced requisite to 60CW. Limited to first-year freshmen. Letter grading. 60A-60B. Lecture, three hours; discussion, two hours. Interdisciplinary exploration of U.S. society from Brown versus Board of Education (1954) to resignation of Nixon versus Board of Education (1974). Topics include civil rights, Great Society, anti-Vietnam war movement, political and artistic countercultures, and changes in technology, law, and media. 60CW. Special Topics. Seminar, three hours. Enforced requisite: course 60B. In-depth examination of political and cultural issues affecting U.S. society from 1954 to 1974. Satisfies Writing II requirement.


70A-70D. Evolution of Cosmos and Life. (6 each) Course 70A is enforced requisite to 70B, which is enforced requisite to 70CW or 70DW. Limited to first-year freshmen. Letter grading. 70A-70B. Lecture, three hours; discussion, 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. 70B. Special Topics. Seminar, three hours. Enforced requisite: course 70A. In-depth examination of cross-sectional of classical and modern social theories and debates that shape them. 70CW. Special Topics. Seminar, three hours. Enforced requisite: course 70B. In-depth examination of political and cultural issues affecting U.S. society from 1954 to 1974. Satisfies Writing II requirement.

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Scope and Objectives

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Freshman clusters are designed to strengthen the writing, quantitative reasoning, critical thinking, and information literacy skills that students need to excel at UCLA. At the conclusion of the entire yearlong cluster, students complete over a third of their general education course requirements and fulfill the Writing II requirement. Cluster students are eligible for three terms of honors credit, with the Spring Quarter seminar providing Honors Collegium credit.

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both life and physical sciences. Examination of evolu-
tion of universe, galaxy, solar system, and Earth in
course 70A; focus on evolution of life in course 70B.
70CW. Special Topics in Life Sciences. Seminar, three
hours. Enforced requisite: course 70B. Not open for
credit to students with credit for course 70DW. Exam-
ination in depth of various issues of evolution in cos-
mos from life sciences perspective. Satisfies Writing II
requirement. 70DW. Special Topics in Physical Sci-
ces. Seminar, three hours. Enforced requisite: course
70B. Not open for credit to students with credit for
course 70CW. Examination in depth of various issues
of evolution in cosmos from physical sciences perspec-
tive. Satisfies Writing II requirement.

71A-71B-71C. Biotechnology and Society. (5-5-
5) Course 71A is enforced requisite to 71B, which is
enforced requisite to 71CW. Limited to first-year fresh-
men. Letter grading. 71A-71B. Lecture, three hours;
discussion, two hours; laboratory, two hours. Explora-
tion of methods, applications, and implications of bio-
technology and of ethical, social, and political implica-
tions as well as biological underpinnings. 71CW. Spe-
cial Topics. Seminar, three hours; laboratory, five
hours. Enforced requisite: course 71B, and English Com-
position 3 or 3H or Eng-
lish as a Second Language 36. Topics include in-depth
examination of ethics and human genetics, bioweap-
ons and biodefense, sex and biotechnology. Satisfies
Writing II requirement.

72A-72B-72CW. Sex from Biology to Gendered So-
ciety. (6-6-6) Course 72A is enforced requisite to 72B,
which is enforced requisite to 72CW. Limited to first-
year freshmen. Letter grading. 72A-72B. 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, ap-
proached from complementary perspectives of anthro-
pology, biology, medicine, and sociology. Specific top-
ics include biological origins of sex differences, inter-
sex, gender identity, gender inequality, homosexuality;
sex differences, sex/gender and law, and politics of sex
research. 72CW. Special Topics. Seminar, three hours.
Enforced requisite: course 72B. Topics may include
politics of reproduction, sexuality, sexual identity, social
construction of gender, and reproductive technologies.
Satisfies Writing II requirement.

80A-80B-80CW. Frontiers in Human Aging: Bi-
omedical, Social, and Policy Perspectives. (6-6-6)
Course 80A is enforced requisite to 80B, which is en-
forced requisite to 80CW. Limited to first-year fresh-
men. 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 poli-
cy. Study of biomedical and biological aging and psy-
chological, social, and ethical implications of phenom-
ena. 80CW. Special Topics. Seminar, three hours.
Enforced requisite: course 80B. In-depth examination
of gender and aging, cellular aging, cancer, and aging of
brain. Satisfies Writing II requirement.

97A. Cluster Colloquium: Variable Topics. (1) (For-
merly numbered 97A-97Z) Seminar, one hour. Vari-
able 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 Class-
es for topics and instructors. May be repeated once for
credit. P/NP grading.

Professors
John A. Agnew, Ph.D.
Judith A. Carney, Ph.D.
Michael R. Curry, Ph.D.
Jared M. Diamond, Ph.D.
C. Cindyl Fan, Ph.D.
Susanna B. Hecht, Ph.D.
Glen M. MacDonald, Ph.D.
Marilyn N. Raphael, Ph.D.
David L. Rigby, Ph.D.
Allen J. Scott, Ph.D.
Laurence C. Smith, Ph.D.
Michael C. Stopper, Ph.D.
Stanley W. Trimble, Ph.D.
Yongkang Xue, Ph.D.

Professors Emeriti
Charles F. Bennett, Jr., Ph.D.
William A.V. Clark, Ph.D.
Gary S. Dunbar, Ph.D.
J. Nicholas Entin, Ph.D.
Gerry A. Hale, Ph.D.
Antony R. Orme, Ph.D.
Melissa Savage, Ph.D.
Werner H. Tejqiung, Ph.D.
Benjamin E. Thomas, Ph.D.
Norman J.W. Thrower, Ph.D.
Hartmut S. Walter, Ph.D.

Associate Professors
Stephen A. Bell, Ph.D.
Thomas W. Gillespie, Ph.D.
Gregory S. Koen, Ph.D.
Yongwei Sheng, Ph.D.
Michael E. Shin, Ph.D.

Assistant Professors
Daniela F. Cusack, Ph.D.
Lisa Kim Davis, Ph.D.
Liebra B. Faier, Ph.D.

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-
borhoods within Los Angeles. Others are
regional, such as determining the best locations
for nature reserves in California. Many are
global, such as the study of climate change
and how they affect climates, culture and re-
source issues in developing countries, and the
impact of information technologies on people in
different places.

The work of geographers often takes them out
of the classroom into the field to collect infor-
mation on topics that range from the settlement
of new immigrants to the distribution of endan-
gered species, the erosion of shorelines, and
the location of high-tech businesses. On other
occasions, geographers work in laboratories,
using techniques such as the computer analy-
sis of satellite photographs, which are then
processed with the computer modeling of
shifts in global vegetation patterns and the
distribution of human populations. Research
is also conducted in libraries and archives, pro-
bing documentary sources on human interaction
with the natural world and how that world is
imagined.

Geography graduates have a wide variety of
career opportunities because of their combina-
tion of geographical/environmental perspec-
tives and technical skills. UCLA geography stu-
dents have gone on to become university scholars, school teachers, members of govern-
mental and nongovernmental planning, devel-
oment, and conservation agencies, business
executives, lawyers, and specialists in geo-
ographical information analysis for government
and private business. Because of its sophisti-
cated focus on the relationship of the global to
the local, geography is particularly useful for
those who wish to pursue careers with an inter-
national focus.

The department has one of the top programs in
the U.S. and offers two undergraduate majors
that lead to the Bachelor of Arts degree: Geog-
raphy and Geography/Environmental Studies. The Geography major combines a broad back-
ground in the field with specific tracks. The Geog-
raphy/Environmental Studies major focuses
on the impact of humans on the natural envi-
ronment. Also offered is an undergraduate mi-
nor in Geospatial Information Systems and
Technologies.

The department also offers M.A. and Ph.D. de-
grees. Student research projects are con-
ducted in collaboration with a faculty adviser
and advisory committee. Graduate students
work in most major areas of geography and on
projects around the world. Graduate alumni of
the department have teaching positions at
many leading universities in the U.S. and
abroad.

Undergraduate Study

Geography B.A.

The Geography major allows students to com-
bine a broad background in the field with more
specific interests and career goals. Students
can select classes in several areas of geogra-
phy such as urban, economic, cultural, environ-
mental, 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:
1) 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 possi-
ble prior to admission to UCLA: one physical
gerography or biogeography course, one cul-
tural geography or economic geography
course, and one statistics course.

Refer to the UCLA Transfer Admission Guide
at http://www.admissions.ucla.edu/prospect/
adm_tr.htm for up-to-date information regarding
transfer selection for admission.

The Major

Required: Eleven upper division geography
courses (44 units minimum), each taken for a
letter grade.
Geography/Environmental Studies B.A.

The major in Geography/Environmental Studies develops and deepens students’ understanding of environmental issues; it explores problem-solving approaches from an interactive people/nature viewpoint and involves analysis of social, physical, and biotic environmental systems. The major’s uniqueness lies in its emphasis on its geographical perspective of human impacts on natural systems, as well as of implications of global change on local and regional human systems.

Preparation for the Major

Required: Geography 1 or 2, 3 or 4 or 6, 5, and Statistics 12. Each course must be taken for a letter grade. Students are strongly advised to complete all preparation for the major courses before beginning upper division work in the major.

Transfer Students

Transfer applicants to the Geography/Environmental Studies 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, one people and ecosystems course, and one statistics course.

Refer to the UCLA Transfer Admission Guide at http://www.admissions.ucla.edu/prospect/adm_tr.htm 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) natural systems core — two courses from 100, 101, 102, 103, 104, 105, 108, 111, 112, M127; (2) human systems core — two courses from 118, 133, 134, 138, 140, 142, M146, 147, 148, 150, 151, M153, 155, 159A; (3) environmental studies cluster — four courses from M106, M107, M109, 110, 113, 114, M115, 116, 120, 121, 122, 123, 124, 125, 126, M127, M128, 129, M131, 132, 135, 136, M137, 159C, 159D, 159E; (4) procedures — two courses (8 units) from 100A (2 units), 101A (2 units), 105A (2 units), 162, 163, 167, 168, 169, 170, M171, 172, 173, 177; and (5) regions — one course from 136, 139, 152, 156, 158, 180, 181, 182A, 182B, 183, 184, 185, 186, 187.

Geography/Environmental Studies majors are advised to complete the required courses in the natural and human systems cores before taking courses in the environmental studies cluster.

Honors Program

The 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 198A and 198B 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 undergraduate advising office for further information.

Computing Specialization

Majors in Geography and Geography/Environmental Studies 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, 30, 60, and Mathematics 61 with a minimum grade of C in each course (Mathematics 32A and 32B are also highly recommended), and (3) completing at least two courses from Geography 104, 167, 168, M171. Students graduate with a bachelor’s degree in their major and a specialization in Computing.

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.

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, or 5.

Required Upper Division Courses (20 units):

Any five upper division geography courses.

No more than 8 units may be applied toward both this minor and a major or minor in another department or program, 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.

To enter the minor, students must be in good academic standing, have completed Geography 7 with a grade of C or better, and file a petition in the Geography Department Advising Office, 1255 Bunche Hall, (310) 825-1166. For majors in Geography or Geography/Environmental Studies, only two upper division courses may overlap between the major and this minor.

Required Lower Division Course (5 units): Statistics 12.

Required Upper Division Courses (24 units minimum): Geography 167, 168, 169, and any three courses selected from 154, 162, 163, 166, 170, M171, 172, 173, and 199 (4 units with approval of the faculty adviser). Each upper division course must be completed with a grade of C or better.

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.
Graduate Study
Official, specific degree requirements are de-
tailed in Program Requirements for UCLA Graduate
Degrees. Most programs are available at the Graduate
Division website, http://www.gdnet.ucla.edu/
gsaa/library/pgmrqintro.htm. In many cases, more
detailed guidelines may be outlined in an-
nouncements, other publications, and websites of
the schools, departments, and programs.

Graduate Degrees
The Department of Geography offers Master of
Arts (M.A.), Candidate in Philosophy (C.Phil.),
and Doctor of Philosophy (Ph.D.) 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 a Changing World. (5) Lecture,
three hours; discussion, two hours. Biogeographic ex-
ploration of plant and animal diversity and conserva-
tion issues and concepts around the world. Study of physical,
biotic, and human factors responsi-
ble for evolution, persistence, and extinction of species and
ecological communities. Analysis of effects of hu-
man activity. P/NP or letter grading.

3. Cultural Geography. (5) Lecture, three hours;
discussion, two hours. Introduction to cultural
geography of modern world, with examination of key concepts of
space, place, and landscape as these have changed and been 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
global scales — local, regional, national, and
global. Key theme is impact of increasingly powerful
global economic forces on organization of production.
P/NP or letter grading.

5. People and the Earth’s Ecosystems. (5) Lecture,
three hours; laboratory, two hours. Exploration of ways in
which human activity impacts natural environment and
how modification of environment can eventually have significant consequences for human activity. Ex-
amination, using case studies, of real environmental
problems that confront us today. P/NP or letter grading.

6. World Regions: Concepts and Contemporary
Issues. (5) Lecture, three hours; discussion, two hours.
Interdisciplinary and historical approach to modern peoples, their differences in wealth or poverty, and
their local origins of food production. Brief introduction to physical geography and biogeography of each
region. Discussion of each region’s peoples, languages,
foods, prehistories, and histories. P/NP or letter grad-
ing.

7. Introduction to Geographic Information Sys-
tems. (5) Lecture, three hours; laboratory, two hours.
Designed for freshmen/sophomores. Introduction to fundamental principles and concepts necessary to carry out sound geograph-
ic analysis with geographic information systems (GIS). Reinforcement of key issues in GIS, such as geo-
graphic coordinate systems, map projections, spatial
analysis, and visualization of spatial data. Laboratory exercises use database query, manipulation, and spa-
tial analysis to address real-world problems. P/NP or letter grading.

Upper Division Courses
100. Principles of Geomorphology. (4) Lecture,
three hours; reading period, one hour. Requisite:
course 1. Recommended: course 100A. Study of pro-
cesses that shape the world’s landforms, with empha-
sis on weathering, mass movement, fluvial erosion,
transport, deposition; energy and material transfers;
and changes in landforms. P/NP or letter grading.

101. Coastal Geomorphology. (4) Lecture, three
hours; reading period, one hour. Requisite: course 1.
Recommended: course 101A. Study of origin and de-
velopment of coastal landforms, emphasizing past and present
processes, sediments, stratigraphic sequences, sediment
transfers, and such features as beaches, estuaries, la-
goons, deltas, wetlands, dunes, seaciffs, and coral
reefs, together with coastal zone management. P/NP
or letter grading.

110. Population and Natural Resources. (4) Le-
cure, three hours; reading period, one hour. Designed
for juniors/seniors. Examination of debate about envi-
ronmental change and ability of the planet to maintain
a growing population. Exploration 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
countries, in context of increasing population in developing coun-
tries and decreasing population in Western countries. P/NP or letter grading.

111. Forest Ecosystems. (4) Lecture, three hours;
field trips. Requisite: course 2. Recommended: course 105. Field
and laboratory investigations into role of water in geo-
graphic processes and impacts on landscape. Students solve
problems using database query, manipulation, and spatial
analysis. P/NP or letter grading.

112. Analytical Animal Geography. (4) Lecture,
two hours. Designed for sophomores. Focus on current issues in
animal geography and concepts necessary to carry out sound geograph-
ic analysis with geographic information systems (GIS).
P/NP or letter grading.

113. Humid Tropics. (4) Lecture, three hours;
field trips. Designed for juniors/seniors. Examination of humid
tropics, with emphasis on rainforests, their ecological
principles, and historical impact on human societies.
P/NP or letter grading.

116. Population and Natural Resources. (4) Le-
cure, three hours; reading period, one hour. Designed
for seniors. Examination of debate about envi-
ronmental change and ability of the planet to maintain
a growing population. Exploration 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
countries, in context of increasing population in developing coun-
tries and decreasing population in Western countries. P/NP or letter grading.

119. Human Impact on Biophysical Environment:
What Science Has Learned. (4) Same as Environ-
ment M107. Lecture, three hours; discussion, one hour.
Designed for sophomores. Examination of his-
tory, mechanisms, and consequences of interactions between
humans and environment, with emphasis on role
of science in explaining role of humans in increas-
ing climate impact, with emphasis on the last three million
years, including evidence for glacial and interglacial
oscillations, historic changes, paleogeographic recon-
struction, external and internal forcing mechanisms,
and human implications. P/NP or letter grading.

120. Tropical Climatology. (4) Lecture, three hours;
in-depth exploration of development of tropical climate,
with special reference to hurricanes, ENSO, and mon-
soons. Examination of human interaction with tropical climate, with focus of impacts of past and present
processes, hydrodynamic processes, sediment trans-
fers, and such features as beaches, estuaries, la-
goons, deltas, wetlands, dunes, and seaciffs, together
with coastal zone management. P/NP or letter grading.

122. Analytical Animal Geography. (4) Lecture,
two hours. Designed for sophomores. Focus on current issues in
animal geography and concepts necessary to carry out sound geograph-
ic analysis with geographic information systems (GIS).
P/NP or letter grading.

123. Analytical Animal Geography. (4) Lecture,
two hours. Designed for sophomores. Focus on current issues in
animal geography and concepts necessary to carry out sound geograph-
ic analysis with geographic information systems (GIS).
P/NP or letter grading.

132. Globalization: Regional Development and
World Economy. (5) Lecture, three hours; discussion,
two hours. Biogeographic exploration of plant and animal diversity and conserva-
tion issues and concepts around the world. Study of physical,
biotic, and human factors responsi-
ble for evolution, persistence, and extinction of species and
ecological communities. Analysis of effects of hu-
man activity. P/NP or letter grading.

133. Tropical Climatology. (4) Lecture, three hours;
in-depth exploration of development of tropical climate,
with special reference to hurricanes, ENSO, and mon-
soons. Examination of human interaction with tropical climate, with focus of impacts of past and present
processes, hydrodynamic processes, sediment trans-
fers, and such features as beaches, estuaries, la-
goons, deltas, wetlands, dunes, and seaciffs, together
with coastal zone management. P/NP or letter grading.

146. Applied Climatology: Principles of Climate
Impact on Natural Environment. (4) (Same as Atmo-
spheric and Oceanic Sciences M166.) Lecture, three
hours; discussion, one hour. Designed for juniors/se-
niors. Exploration of knowledge and tools to solve complex problems in contemporary applied climatolo-
y, including current practices, influence of climate on
environment, and human influence on changing cli-
mates. P/NP or letter grading.

155. Environmentalism: Past, Present, and Fu-
uire. (4) (Same as Environment M132 and Urban Planning M165.) Lecture, three hours; discussion, one hour.
Exploration of history and origin of major environ-
mental ideas, movements or countermovements they
spawned, and new and changing nature of modern en-
vironmentalism. Introduction to early environmental
movement, how rise of modern sciences reshaped environ-
mental thought, and how this was later transformed by late-19th-century ideas and rise of American conservation
movement. Review of origins of environmental
thought and contemporary environmental
issues as they relate to 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. (Same as Urban Planning M150.) Lecture, three hours; discussion, one hour. City landscapes and their representation in Europe, the U.S., and California. Survey of specific concept or method of landscape study each week, with detailed discussion of its expression in American and Californian geography. P/NP or letter grading.

M146. Feminist Geography. (4) (Same as Women's Studies M146.) Lecture, three hours; discussion, one hour. Critical engagement of gender as concept of geographic inquiry. Geographies, 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, locality. 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. Required: 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.


M151. Historical Geography of Modern World. (4) Lecture, three hours; reading period, one hour. Required: course 5 or 6. 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 geographic problems of urbanization. Field projects, city field trips to European cities. Participation attention to historical development and landscapes of capital cities such as Rome, Paris, and Berlin. P/NP or letter grading.

M153. Parks, Societies and Their Lessons for Our Own Future. (5) (Same as Anthropology M158Q and Honors Collegium M152.) Lecture, two hours; discussion, two hours. Examination of modern and past tribal and band societies, with emphasis on non-Western societies (Native Americans, New Guineans, and others) that met varying fates, as background to examination of how modern state societies are coping or failing to cope with similar issues. P/NP or letter grading.

154. Images of Earth: World from Above. (4) Lecture, three hours. Use of maps, charts, diagrams, and other images to show how Earth has been represented through ages, how they have been influenced by current ideas of how they function, and how they themselves influence course of events. P/NP or letter grading.

155. Industrial Location and Regional Development. (4) Lecture, three hours. Requisite: course 4 or Economics 4, 18 or 19. Designed for juniors and seniors. Study of origins, growth processes, internal structure and pattern, interactions, and environmental and spatial problems of the Los Angeles metropolitan area. P/NP or letter grading.


157. Korean Urban Experience. (4) Lecture, three hours; reading period, one hour. Designed for juniors and seniors. Study of origins, growth processes, internal structure and pattern, interactions, and environmental and spatial problems of the South Korean city. P/NP or letter grading.

158. Special Studies. (1-5) Seminar, one hour. Enforced requisite: consent of department and working with existing models. P/NP or letter grading.

159A. Problems in Geography, (4 each) Discussion, three hours; discussion, three hours. Preparatory: completion of three courses in a concentration. Limited to seniors. Seminar course in which students carry out independent research projects developed from courses within a concentration. P/NP or letter grading.

159B. Spatial Demography and Social Processes in the City, V. Culture and Environment.- The Modern World; 159D. Physical Geography; 159E. Biogeography.

Procedures

162. Glacier Environments of California's High Sierras. (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 Sierras. 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 (SNARL). Offered in summer only. P/NP or letter grading.

163. Field Analysis in Biogeography. (4) Fieldwork, eight hours. Requisites: courses 2, 5, 108, 112. Examination of the fundamental concepts and architecture of programming. Coverage of geographic information systems (GIS), and programming in GIS environment. Topics include the use of geographic information systems (GIS), and programming in GIS environments.
mental change. May be repeated for credit. Concurrently scheduled with course C296A. P/NP or letter grading.

195. Community or Corporate Internships in Geography. (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.

198A-198B. Honors Research in Geography I, II, (4-4) Tutorial, to be arranged. Preparation: 3.5 grade-point average overall, at least five upper division geography courses with 3.5 grade-point average. Limited to juniors/seniors. Thesis or comprehensive research project under direction of instructor and completion of honors thesis or comprehensive research project under direct supervision of one or two faculty members. May be repeated for maximum of 16 units. Individual contract required. Letter grading.

199. Special Studies. (2-8) Tutorial, to be arranged. Limited to juniors with B average in major or seniors. May be repeated for maximum of 16 units. P/NP or letter grading.

Graduate Courses

Environment

200. History and Paradigms of Geomorphology. (4) Lecture, two hours; discussion, one hour; reading period, one hour. Preparation: courses 201, 103, 105, M107. Requisite: course 100. Analysis of geomorphic theories since the scientific revolution, with emphasis on catastrophism, uniformitarianism, glacial theories, isostasy and eustasy, evolution and cyclicality, thermodynamics and mechanics, quantification, and current paradigms. View of each theme in its contemporary place.

201. Coastal Geomorphology Seminar. (4) Discussion, three hours; reading period, five hours; fieldwork. Requisites: courses 100, 101. Discussion of selected topics pertaining to geomorphic processes and responses observable in the coastal zone. May be repeated for credit.

202. Fluvial Geomorphology Seminar. (4) Discussion, three hours; reading period, five hours; fieldwork. Requisites: courses 100 and 105, or Civil Engineering 150. Discussion of selected topics pertaining to action of running water in shaping the physical landscape. May be repeated for credit.

203. Glacial Geomorphology Seminar. (4) Discussion, three hours; reading period, five hours; fieldwork. Requisites: courses 100, 103. Discussion of selected topics pertaining to action of snow and ice in arctic and alpine environments. May be repeated for credit.

204A and 204B. Climatic Geomorphology. (4) Lecture, three hours; laboratory, one hour. Preparation: first year of calculus and acquaintance with Fortran IV. Requisite: course 104. Courses must be taken in sequence. Introduction to tools and concepts of environmental physics of relevance to natural and man-made landscapes. Such basic intellectual, mathematical, and computer programming tools are of special concern to physical geographers, ecologists, and architects.

205. Seminar: Climatology. (4) Discussion, three hours; reading period, one hour. Requisites: courses 204A, 204B, 204C. Selected topics. May be repeated for credit.

206. 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; discussion, 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.

207. Regional Climate and Terrestrial Surface Processes Seminar. (4) Seminar, three hours. Designed for graduate students. Physical concepts and basic principles of land-surface/groundwater interactions. Exploration of topics in terms of regional and global perspective and implications. Human activities cause changes in land cover, water, and energy balances. Some regions, in particular, appear to be “hot spots.” Regions to be studied in detail. S/U or letter grading.

208. Advanced Biogeography: Plants. (4) Lecture, two hours; discussion, one hour; reading period, one hour. Requisites: courses 108, and 110 or 116. Intensive review and analysis of physical and cultural factors influencing plant distributions.

212. Advanced Biogeography: Animals. (4) Lecture, two hours; discussion, one hour; reading period, one hour. Requisite: course 112. Intensive review and analysis of biological and cultural factors influencing animal distributions. S/U or letter grading.

213. Seminar: Biogeography. (4) Discussion, three hours; reading period, two hours. Requisite: course 208 or 212. Related research projects growing out of course 208 or 212. May be repeated for credit.

215. Quaternary Studies: Physical Aspects. (4) Discussion, three hours; reading period, two hours; fieldwork, three hours. Preparation: at least one course from 200 through 205 or one appropriate graduate course in atmospheric and oceanic sciences or Earth and space sciences. Analysis of changing physical environment of Quaternary period. May be repeated for credit.

217. Quaternary Studies: Ecological Aspects. (4) Discussion, three hours; reading period, two hours. Requisites: courses 202 or 204A, 204B, and 204C or 208 or 212 or one appropriate graduate course in anthropological, botany, Earth and space sciences, or zoology. Analysis of ecological aspects of environmental change during Quaternary period. May be repeated for credit.

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 intense review of recent research.

223. Seminar: Humid Tropics. (4) Seminar, three hours; reading period, two hours. Designed for graduate students. Selected topics. Biophysical and cultural complexes of the humid tropics, with emphasis on problems related to human settlement and livelihood. May be repeated for credit. S/U or letter grading.

228. Human Security and Environmental Change. (4) Seminar, three hours. Discussion of impact of environmental change on food, water, and physical security of human populations and societies’ adaptations to environmental changes. Topics vary from year to year. S/U or letter grading.

229. Resource-Based Development. (4) (Same as Urban Planning M234C.) Discussion, three hours. Recommended preparation: Urban Planning 234A. Study of economic development of specific natural resources. Topics include nature of particular resource (or region associated with it), its previous management, involvement of state, corporations, and local groups, and environmental and social impact of its development. Letter grading.

Human Geography

231. Terminology and Theory in Political Economy: Deconstruction and Reconstruction of Approaches in Research, Writing, and Practice. (4) Discussion, three hours; reading period, three hours. Designed for deconstruction of oft-used terms in intellectual discourse with goal of making assumptions more explicit, analysis more concise, and use of theory to inform practice (and vice versa) more successful. Construct a more concise and useful terminology to inform theoretical inquiry and research practice. S/U or letter grading.

232. Advanced Cultural Geography. (4) Lecture, 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.

233. Seminar: Cultural Geography. (4) 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.

234. Environment and Subsistence in Indigenous Cultures. (4) Seminar, three hours. Discussion on subsistence and management of environmental issues in indigenous cultures. Topics vary from year to year.

235. Seminar: Social Geography. (4) Seminar, three hours; reading period, one hour. Process of doing socio-cultural geography entails conceptualizing, adapting, and reformulating social and critical theories of space, subject, and power. Examination of this process in considering theoretical concepts of social space and current research.

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.

240. Advanced Political Geography: Geopolitics. (4) Lecture, two hours; discussion, one hour; reading period, one hour. Intensification and principles of geopolitics. Selected regions used as examples of differing techniques of study in geopolitics. S/U or letter grading.

241. Seminar: Political Geography. (4) Discussion, three hours; reading period, two hours. Requisite: course 240. Related research projects growing out of course 240. May be repeated for credit.


249. Seminar: Economic Geography. (4) Discussion, three hours; reading period, one hour. Requisite: course 248. Related research projects growing out of course 248. May be repeated for credit.

250. Urban Systems. (4) Lecture, two hours; discussion, one hour; reading period, one hour. General study of hierarchy of urban places, including diffusion within urban hierarchy and theories to account for location and distribution of cities. S/U or letter grading.

251. Seminar: Urban Geography. (4) Discussion, three hours; reading period, two hours. Requisite: course 250. Related research projects growing out of course 250. May be repeated for credit.

Procedures

260. Advanced Field and Laboratory Analysis in Geomorphology. (4) Laboratory/workfield, 10 hours. Preparation: two courses from 200, 201, 202, 203, 215. Designed for graduate students. Examination of advanced field and laboratory procedures used in contemporary geomorphic research, with emphasis on scientific design, instrumentation, and data evaluation.

262. Advanced Field Analysis: Biogeography. (8) Fieldwork, 10 hours. Observation, measurement, and analysis of biogeographic phenomena, including identification and evaluation of biotic populations and communities, and the techniques and methodologies used to understand and modify the physical and social impact of the human activity.

268. Advanced Projects in Geographic Information Systems (GIS)/Remote Sensing. (4) Discussion, one hour; laboratory three hours. Recommended prerequisite: course 169 or 170 or Earth and Space Sciences 150. Familiarity with a GIS or image processing package expected. Individualized research projects conducted on UNIX platforms within a structured course environment. All aspects of a modest but original project, in-
Core Courses

297A. History of Modern Geography. (4) 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.

297B. Physical Basis of Geography. (4) 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.

297C. Evolution, Ecology, Environmentalism, and Roots of Modern American Geography. (4) Seminar, three hours; reading period, one hour. Discussion of how contemporary development of modern concepts of evolution, ecology, and environmentalism influenced, and were influenced by, development of modern geography as academic discipline. S/U or letter grading.


299A. Statistical Methods for Geographic Research. (4) 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.

299B. Geographic Data Visualization and Analysis. (4) Lecture, three hours; laboratory, two hours. Requisites: course M168, 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.

299C. Qualitative Methods and Methodology. (4) 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.

299D. Research Design in Geography. (4) 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.

299E. Remote Sensing of Environment. (4) Formerly numbered 269.) Laboratory, three hours; independent study, two hours. Requisite: course 167. Study of aerial photographs and other remote sensing 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.

Scope and Objectives

The Department of Germanic Languages offers an extraordinary array of courses in languages, literatures, and cultures. This broad range of studies offers training in specialized fields such as film, linguistics, folklore, and critical theory. Courses prepare students for a variety of careers, including law, business, international relations, academic professions, and publishing.

Undergraduate majors earn a Bachelor of Arts degree. The graduate program offers Master of Arts and Ph.D. degrees. Refer to the Scandinavian Section later in this catalog for information about the degrees in Scandinavian studies.

At all levels of study various specializations are possible. Language, literature, and culture studies are available in Afrikaans, Dutch, and Icelandic, in addition to German. The program also provides opportunity for study, work-study, and internships in a German-speaking country or in a country related to the course of study.
Undergraduate Study

Grammar/Composition Courses
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. Students with demonstrated preparation may be permitted to transfer to a more advanced course with consent of the instructor.

German B.A.
The German major is designed for students who seek a solid grounding in the German language, an introduction to the study of linguistics, literature, and cultural studies, and the opportunity to determine their own area of focus.

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 the language program supervisor.

Transfer Students
Transfer applicants to the German major with 9 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 at http://www.admissions.ucla.edu/prospect/adm_tr.htm for up-to-date information regarding transfer selection for admission.

The Major
Required: German 140 (or 141), 152, 153, 158, six upper division German courses (at least two of which must be at the 150 level or above), and two upper division courses that may be in German or in another Germanic language or in related fields such as history, linguistics, music, philosophy, and political science. Each course must be taken for a letter grade.

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 (20 units): German 152, 153, and any three German courses (excluding German literature in translation).

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.

Germanic Languages Minor
To enter the Germanic Languages minor, students must have an overall grade-point average of 2.0 or better.

Required Upper Division Courses (28 units): Seven courses in any of the following languages and literatures: Afrikaans, Dutch, German (excluding German literature in translation), Scandinavian languages, Yiddish.

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, http://www.gdnet.ucla.edu/gasaa/library/pgmrqintro.htm. 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 (M.A.), Candidate in Philosophy (C.Phil.), and Doctor of Philosophy (Ph.D.) degrees in Germanic Languages and a Master of Arts (M.A.) degree in Scandinavian (see Scandi-

Graduate Study

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Graduate Degrees
The Department of Germanic Languages offers Master of Arts (M.A.), Candidate in Philosophy (C.Phil.), and Doctor of Philosophy (Ph.D.) degrees in Germanic Languages and a Master of Arts (M.A.) degree in Scandinavian (see Scandinavian Section).

Dutch

Lower Division Course
10. Contemporary Dutch Society and Culture: Beyond Rembrandt, Cheesem, and Wooden Shoes. (5) (Formerly numbered 100.) 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 1782) 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 and society with 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 Soon, Claus, Couperus, Herrmans, Mulisch, Multatuli, and Reve and selected poets such as Campert, Gezelle, Gorter, Klos, Lucbott, Nijhoff, van Ostaijen, and Vroman. Letter grading.


131. Introduction to Modern Dutch Literature. (4) Discussion, three hours. Requisite: course 103B or 120. Selected works of literature of Nether-lands and northern (Flemish) Belgium from mid-1850s to present, including novels by such writers as Multatuli, Couperus, Herrmans, Mulisch, and Reve and poetry by such groups as symbolist Beweging van Tachtig and post-War Beweging van Vijftig. P/NP or letter grading.
German

Lower Division Courses

1. Elementary German. (4) Lecture, five hours; laboratory, one hour. P/NP or letter grading.
2. 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.
3. Elementary German. (4) Lecture, five hours; laboratory, one hour. Enforced requisite: course 1. P/NP or letter grading.
4. Intermediate German. (4) Lecture, four hours. Preparation for Graduate Division foreign language reading requirement. May not be applied toward degree requirements. S/U grading.
5. Intermediate German. (4) Lecture, four hours; laboratory, one hour. Enforced requisite: course 3. P/NP or letter grading.
6. Intermediate German. (4) Lecture, four hours; laboratory, one hour. Enforced requisite: course 5. P/NP or letter grading.
7. 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.
9. German Conversation. (3) Lecture. Three hours. Enforced requisite: course 3. Conversation course designed for intermediate and advanced students who wish to improve their spoken command of German. Topics of current student interest to be used as basis for conversation. P/NP or letter grading.

10. Directed Research or Senior Project in Dutch. (4) Tutorial, to be arranged with faculty member who directs study (see department for I.D. number). May be repeated once. S/U grading.
11. Preparation for Ph.D. Qualifying Examinations. (4) Tutorial, to be arranged with faculty member who directs study (see department for I.D. number). S/U grading.

Upper Division Courses

100. German History and Culture before 1500. (5) Formerly numbered 100A.) Lecture, three hours; discussion, one hour. Taught in English. Development of German culture and society from beginning to 1500 as represented in literature, art, and architecture. P/NP or letter grading.
101. German History and Culture, 1500 to 1914. (4) Formerly numbered 100B.) Lecture, three hours; discussion, one hour. Taught in English. Study of German culture and society as represented in literature, art, music, and architecture from Reformation and invention of printing to start of World War I. P/NP or letter grading.
102. War, Politics, Art. (5) Formerly numbered 100C.) Lecture, three hours; discussion, one hour. Taught in English. Analysis of interrelationship between politics, social conditions, and arts with respect to war. World Wars I and II and German history to be used as model for principal questions of society and philosophical thinking. P/NP or letter grading.
103. German Film in Cultural Context: Early German Film. (4) Formerly numbered 102A.) Lecture, two hours; discussion, one hour. Taught in English. Survey of German film between 1919 and 1945. Analyzing the sociological and stylistic development of film from silent Expressionist films to Nazi propaganda and entertainment films. Film discussions enhanced by interactive media. Letter grading.
104. German Film in Cultural Context, 1945 to Present. (4) Formerly numbered 102B.) Lecture, two hours; discussion, one hour. Taught in English. Survey of German film since 1945 in its thematic and stylistic development. Did German filmmakers after World War II and Holocaust, economic recovery, Cold War and division of Germany, reunification, and growth of minority communities? Film discussions enhanced by interactive media. Letter grading.
105. Tristan, Isolde, and History of Heterosexuality. (4) Formerly numbered 110A.) Lecture, three hours. Taught in English. German, French, and English versions of Tristan and Isolde from Middle Ages to 20th century. Particular attention to relation between representation of heterosexual love in each text and contemporaneous ideas about human sexuality. P/NP or letter grading.
106. Bargaining with Devil. (4) Lecture, three hours. Taught in English. Investigation of how devil’s pact has served as metaphor for human desire to transcend limits of power, human knowledge, and artistic achievement. Readings and viewings include Book of Genesis, historical documents from witchcraft trials, Goethe’s Faust, romantic stories and fairy tales, and Rosemary’s Baby. Letter grading.
107. Love and Sex in German Literary Tradition. (4) Formerly numbered 110B.) Lecture, three hours. Taught in English. Study of major literary works that address issues of idealized desire, emotional/sexual boundaries, and development of sexual identity. Letter grading.
108. Nietzsche and Critique of Western Culture. (4) Formerly numbered 110.) Lecture, two hours; discussion, one hour. Taught in English. Readings that focus on Nietzsche’s critique of Christianity, master/slave dynamic, and reciprocal relation between poetry and philosophy. German majors required to complete reading in German. Letter grading.
109. Jewish Question and German Thought. (4) Formerly numbered 112.) Lecture, three hours. Taught in English. Analysis of works that represent process of Jewish assimilation, disenfranchisement, and extermination, including authors such as Mendelssohn, Heine, Kafka, Paul Celan, Nelly Sachs, Anne Frank, and others. Letter grading.
110. Special Topics in Modern Literature and Culture. (4) (Formerly numbered 116.) Lecture, three hours. Taught in English. Content varies with instructor and may include works by authors such as Thomas Mann, Rilke, Kafka, Brecht, Christa Wolf, and others. May be repeated for credit. Letter grading.

111. Thomas Mann, Hesse, Böll, and Grass: German Writers in English. (Formerly numbered 117.) Lecture, three hours. Taught in Eng.-

112. Feminist Issues in German Literature and Culture. (Formerly numbered 118.) Lecture, three hours. Taught in English. Analysis of major issues in German feminism today (e.g., status, creative work, and reception of women writers in various periods such as Romanticism, Fascism, and/or divided/unified Germany). Letter grading.

113. German Folklore. (Formerly numbered 120.) Lecture, three hours. Taught in English. Survey of various folklore genres in cultural context, including legends, proverbs, and cultural enactments such as carnival. Letter grading.

114. Fairy Tales and Fantastic. (Formerly numbered 122.) Lecture, three hours; discussion, one hour. Taught in English. History and reception of folklore collections in Europe, with particular attention to ideology and influence of Grimms' tales. Interpretation of selected tales and their transformations and appropriation in literature, film, advertising, and pedagogy. P/NP or letter grading.

115. 19th-Century German Philosophy. (Formerly numbered 145.) Lecture, three hours; discussion, one hour. Taught in English. German philosophy, which may generally be characterized as philosophy that takes activity rather than passive subsistence to be fundamental nature of all things, is one of Germany's greatest gifts to humanity. Exploration of first half of two-century history of German philosophy — period from Kant to Nietzsche, including Hegel, Kierkegaard, and Marx. Letter grading.

116. 20th-Century German Philosophy. (Formerly numbered 147.) Lecture, three hours; discussion, one hour. Taught in English. German philosophy, which may generally be characterized as philosophy that takes activity rather than passive subsistence to be fundamental nature of all things, is one of Germany's greatest gifts to humanity. Exploration of second half of two-century history of German philosophy — period from Nietzsche through Habermas, including Heidegger, Gadamer, Jaspers, and Frankfurt School theologians. Letter grading.

117. German Exile Culture in Los Angeles. (Formerly numbered 114.) Lecture, three hours. Taught in English. Cultural and historical exploration of exile as site of creative activity for German writers and other artists during and after World War II. General questions of cultural migration and cultural transfer to be thematized. P/NP or letter grading.

140. Language and Linguistics. (4) (Formerly numbered 150.) Lecture, three hours. Taught in Eng. Language and Linguistics, with emphasis on structure of modern standard German and English, phonetics, phonology, morphology, syntax, semantics and pragmatics. Other topics include diachronic, spatial, and social variation of German (i.e., its historical development, dialectology, and sociolinguistic dimensions). Letter grading.

141. Current Topics in Germanic Linguistics. (4) (Formerly numbered 170.) Lecture, three hours. Enforced requisite: course 152. Taught in English with German proficiency required. In-depth investigation of one topic in field of Germanic linguistics, such as phonetics and phonology, morphology and syntax, semantics and pragmatics, social and spatial variation (i.e., sociolinguistics and dialectology of German), or history of German. May be repeated for credit. Letter grading.

C142. Linguistic Theory and Grammatical Description. (4) (Formerly numbered 172.) Lecture, three hours. Enforced requisite: course 140 or Linguistics 20. Taught in English with German proficiency required. Problems in structure of Dutch and German, considered from theoretical frameworks such as sign-oriented linguistics, functional linguistics, diachronic grammar, and cognitive linguistics. Discussion of formal linguistic approaches. Concurrently scheduled with course C238. Letter grading.

150. German Play Production Act I. (4) (Formerly numbered 153.) Lecture, four hours. Taught in German. Exploration of second half of German plays (readings variable) and to different types of drama and drama theory. Reading, discussion, and analysis of plays in detail, practice in performing roles in class, and writing of short responses in German. May be repeated for credit. Letter grading.

151. German Play Production Act II. (5) (Formerly numbered 119B.) Lecture, four hours. Taught in English. Enforced requisite: courses 3 (enforced), 150. Taught in German. Staging of German play. Students responsible for various aspects of theater production, including acting and technical jobs (costumes, sets, and programs). Intensive pronunciation practice. Two public performances take place at end of term. May be repeated for credit. Letter grading.

152. Conversation and Composition on Contemporary German Culture and Society I. (4) (Formerly numbered 130A.) Lecture, three hours. Requisite: course 6. Taught in German. Structured around themes as they emerge in contemporary German texts ranging from newspapers, novels, to contemporary popular culture. Students will analyze, with emphasis on speaking and writing proficiency. P/NP or letter grading.

153. Conversation and Composition on Contemporary German Culture and Society II. (4) (Formerly numbered 130B.) Lecture, three hours. Requisite: course 6. Taught in German. Structured around themes as they emerge in contemporary German texts ranging from newspapers, novels, to contemporary popular culture. Students will analyze, with emphasis on speaking and writing proficiency. P/NP or letter grading.

154. Business German. (4) (Formerly numbered 130.) Lecture, three hours. Taught in German. Professional language course that teaches German business administration, practices, and correspondence, with attention to cultural nuances. Ongoing development of student proficiency is aided by assignments which include reading via newspaper articles and Internet. P/NP or letter grading.

155. Advanced German Language through Cultural History and Current Affairs. (4) (Formerly numbered 134.) Lecture, three hours. Taught in English. Enforced requisite: course 152 or 153. Taught in German. Advanced German language course that juxtaposes cultural history with current events to teach complex speaking and writing skills of international business. Readings may include selections from Luther, Heine, Freud, and current authors. Students create their own interactive media presentations. Letter grading.

156. Advanced Practical Translation. (5) (Formerly numbered 136.) Lecture, three hours. Taught in German. Enforced requisite: course 155 with grade of B or better. Taught in German. Advanced German to English translation of literary, journalistic, and sociocultural texts. Work in technique of translation.

157. Contemporary German Cinema: Advanced Conversation and Composition. (4) Lecture, three hours. Taught in German. Development of advanced speaking and writing skills in essay writing in German by considering issues of style, structure, grammar, and vocabulary. Introduction to contemporary German cinema to expose students toSlice of German contemporary film history, with focus on notion of boundary. Examination of different types of boundaries and borders (e.g., physical borders between countries; boundaries created by various political ideologies; boundaries of race, class, and gender; boundary between memory and experience), ways in which people cross them, and their reasons for these transgressions. Analysis of movies to better understand various cinematic techniques. P/NP 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 reading. Critical reading of literary texts, development of research techniques, acquire familiarity with basics of literary and cultural analysis, different literary forms, and in pursuit of literary and cultural study. Letter grading.

160. Introduction to German Poetry. (4) (Formerly numbered 140A,) Lecture, three hours. Enforced requisite: course 152 or 153. 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, diction, imagery, symbolism, and metrics. Letter grading.

161. Introduction to German Drama. (4) (Formerly numbered 140B,) Lecture, three hours. Enforced requisite: course 152 or 153. Taught in German. Analysis of selected dramatic genres (e.g., tragedy, comedy, one-act play, lyric drama, lyric theater, historical drama, etc.), including systematic review of dramatic forms, techniques, and subgenres. Texts selected from both contemporary and earlier periods. Letter grading.

162. Introduction to German Narrative Prose. (4) (Formerly numbered 140C,) Lecture, three hours. Enforced requisite: course 152 or 153. Taught in German. Analysis of selected narrative genres (e.g., short story, novella, fairy tales, etc.), including systematic review of narrative forms, techniques, and subgenres. Texts selected from both contemporary and earlier periods. Letter grading.

163. Project of Enlightenment. (4) (Formerly numbered 154.) Lecture, three hours. Enforced requisite: course 152 or 153. Taught in German. Topics in Enlightenment literature, social history, and culture. Works by Goethe, Lessing, Schiller, Kant, Mozart, and others. Letter grading.

164. Introduction to 19th-Century Studies. (4) (Formerly numbered 144.) Lecture, three hours. Enforced requisite: course 152 or 153. Taught in German. Presentation of major texts from Romanticism to realism. Works by Kleist, Büchner, Heine, Fontane, and others. Letter grading.

165. Introduction to Modern Literature. (4) (Formerly numbered 146.) Lecture, three hours. Enforced requisite: course 152 or 153. Taught in German. Analysis of selected modern works written between 1890 and 1945, including texts by authors such as Thomas Mann, Kafka, Rilke, Brecht, and others. Letter grading.

166. Introduction to German Literature. (4) (Formerly numbered 148.) Lecture, three hours. Enforced requisite: course 152 or 153. Taught in German. Analysis and discussion of German, Austrian, Swiss, and ex-East German literature. Emphasis on understanding the nature of作品 by Heinrich Böll, Günter Grass, Friedrich Dürrenmatt, Elfriede Jelinek, and Christa Wolf with view to their specific political and cultural context. Letter grading.

169. Studies in German Literature before 1750. (4) (Formerly numbered 152.) Lecture, three hours. Enforced requisite: course 152 or 153. Taught in German. Readings and analysis of major works from Middle Ages to baroque. Letter grading.

170. Goethe. (4) (Formerly numbered 154.) Lecture, three hours. Enforced requisite: course 152 or 153. Taught in German. Reading and discussion of representative works (except Faust) from Goethe's early period through maturity and old age. Letter grading.

171. Goethe's Faust. (4) (Formerly numbered 156.) Lecture, three hours. Enforced requisite: course 152 or 153. Taught in German. Detailed interpretation of Goethe's major work, Parts I and II, with general consideration of other treatments of Faust theme in European literature. Letter grading.

172. Romanticism. (4) (Formerly numbered 158.) Lecture, three hours. Enforced requisite: course 152 or 153. Taught in German. Reading and analysis of major works by German Romantics, including Friedrich Schlegel, Novalis, E.T.A. Hoffman, and Eichendorff. Letter grading.
173. Advanced Study of Modern Literature. (4) (Formerly numbered 160.) Lecture, three hours. En- forced requisites: course 152 or 153. Taught in German. Literature after 1945 in German-speaking countries, including issues such as national borders, ethnic identity, gender relations, and commer- cialization of culture. Letter grading.

174. Advanced Study of Contemporary Literature and Culture. (4) (Formerly numbered 162.) Lecture, three hours. Enforced requisites: course 152 or 153. Taught in German. Most readings in German; some theoreti- cal readings in English. Exploration of issues sur- rounding immigration and intercultural identity in Ger- many since 1960, with focus on period after 1990. Ex- amination of various cultural spaces, practices, and standpoints as staged in literary and nonliterary texts, with emphasis on constructions of ethnicity, nation, race, class, and gender. Analysis of several political and cultural debates that dominated media and public discussions in Germany and Europe for several weeks. Discussion 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 theoreti- cal pieces that examine relationships between immi- gration, globalization, culture, and identity. P/NP or let- ter grading.

175. Intercultural Germany: Literature, Politics, Mi- gration, and Culture. (4) Lecture, three hours. Taught in German. Most readings in German; some theoreti- cal readings in English. Exploration of issues sur- rounding immigration and intercultural identity in Ger- many since 1960, with focus on period after 1990. Ex- amination of various cultural spaces, practices, and standpoints as staged in literary and nonliterary texts, with emphasis on constructions of ethnicity, nation, race, class, and gender. Analysis of several political and cultural debates that dominated media and public discussions in Germany and Europe for several weeks. Discussion 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 theoreti- cal pieces that examine relationships between immi- gration, globalization, culture, and identity. P/NP or let- ter grading.

176. Readings in Middle High German Literature. (4) Lecture, three hours. Selected readings from 1500 to 1700, with introduction through context. Use of pre- modern Germanic languages and secondary literature. Letter grading.

204. Early Modern German Literature. (4) Lecture, three hours. Selected readings from 1500 to 1700, with introduction through context. Use of pre- modern Germanic languages and secondary literature. Letter grading.


206. Weimar Classicism. (4) Lecture, three hours. Reading and interpretation of major works of German Classicism. May include problems in reception of clas- sicism by later authors and cultural theorists. Letter grading.

207. Romanticism. (4) Lecture, three hours. Analysis of selected works and theories of German Romantics such as Friedrich Schlegel, Novalis, and Hoffmann, with attention to relationship between Romanticism and other periods. Letter grading.


209B. 19th-Century Drama. (4) Lecture, three hours. Analysis of selected plays and their reception from Kleist to Wagner. Discussion of political, social, and cultural drama, Volkstheater, and other forms. Letter grading.


210A. Naturalism, Symbolism, and Expressionism. (4) Lecture, three hours. Analysis of selected works poetry, drama, prose), of late 19th century, from Haupt- mann to Kafka. Discussion of sociological spectra and pluralism of styles and forms. 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. Let- ter grading.

212. Contemporary Literature and Culture. (4) Lecture, three hours. Analysis of current cultural issues and their relation to literary production and interpreta- tion. Topics may include areas such as feminism, post- colonialism, postmodernism, and contemporary theo- ries of textuality. Letter grading.

213. Topics in Literature and Film. (4) Lecture, four hours. Focus on two different modes of cultural representation, examination of topics in German litera- ture and film from Weimar Republic to present. Study of media theory, feminist film theory, and interrelation- ships between film, literature, and social history. Letter grading.

217. History of German Language. (4) Discussion, three hours. Historical survey of development of stan- dard literary German language from time of Indo-Euro- pean ur German to Proto-Germanic, West Germanic, medieval period, Reformation, baroque period, and Enlightenment until its final codification at end of 19th cen- tury. S/U or letter grading.


232. Old High German. (4) Discussion, three hours. Introduction to earliest phases of German literature, with readings in Old High German. Letter grading.

C238. Linguistic Theory and Grammatical Descrip- tion. (4) Lecture, three hours. Enforced requisites: course 140 or Linguistics 20. Taught in English with German proficiency required. Problems in structure of Dutch and German, considered from theoretical frame- works such as sign-oriented, formal lin- guistics, discourse grammar, and cognitive linguistics. Discussion of formal linguistic approaches. Concur- rently scheduled with course C142. Graduate students meet as group, additional hour each week and write research papers of greater length and depth. Let- ter grading.

251. Seminar: Germanic Linguistics. (4) Seminar, three hours. Current topics in synchronic or diachronic lin- guistics, such as specific issues in generative gram- mar, sociolinguistics and dialectology, or language contact. Letter grading.

252. Seminar: Historical and Comparative Ger- manic 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 problematic and classifications of Germanic languages, Old High German influential verbal and nominal morphology, proto-Germanic syn- tax). S/U or letter grading.


256. Seminar: Enlightenment. (4) Seminar, three hours. Selected topics in cultural, literary, and philo- sophic history. May include modern critiques of En- lightenment thought. Letter grading.

257. Seminar: Age of Goethe. (4) Seminar, three hours. Selected topics in literature and culture between 1775 and 1832, with 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 Ameri- can Revolutions. Letter grading.

258. Seminar: Romanticism. (4) Seminar, three hours. Discussion of specific author or topic from Ro- mantic period, possibly in close connection with course 208. Critical review of secondary works. S/U or letter grading.


260. Seminar: Modern Period. (4) Seminar, three hours. In-depth analysis of one particular issue in pre- 1945 German literature and culture. Letter grading.

261. Seminar: Contemporary Literature. (4) Semi- nar, three hours. In-depth analysis of one particular is- sue in post-1945 German literature and culture. Letter grading.

262. Seminar: Germanic Folklore. (4) Seminar, three hours. Detailed investigation of some special as- pects of Germanic folklore, with emphasis on problems of theory and method in analysis of folkloric material. Letter grading.

263. Seminar: Literary Theory. (4) Seminar, three hours. In-depth analysis of one particular issue in pre- 1945 German literature and culture. Letter grading.

M264. Topics in Communicative, Cognitive, and Functional Approaches to Linguistic Analysis. (4) (Same as Applied Linguistics M262.) Seminar, three hours. Requisite: course C142 or C238. Readings, dis- cussion, analyses, and validation procedures within sign-based linguistics, cognitive grammar, and dis- course-functional approaches to language. Consider-
Yiddish

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.


102B-102C. Intermediate Yiddish. (4-4) Lecture, three hours. Requisite: course 102A. Course 102B is requisite to 102C. Grammatical exercises, reading and linguistic analysis of texts, conversation. P/NP or letter grading.


121C. Special Topics in Yiddish Literature in English Translation. (4) Lecture, three hours. Varying topics of importance and relevance to Yiddish literary study. Reading and analysis of wide range of 19th- and 20th-century literature. P/NP or letter grading.

130. Introduction to Yiddish Culture and Language through Film. (4) Lecture, three hours. Introduction to Yiddish language and culture, with focus on classic Yiddish films and documentaries as integral tools for accessing culture associated with this heritage language. Viewing and discussion to gain deeper understanding and appreciation of complexity and scope of Yiddish culture and in particular of annihilated Yiddish civilization of 20th century. These films represent most accessible way available to hear Yiddish spoken in fluent, natural manner. P/NP or letter grading.


131C. Special Topics in Yiddish Literature. (4) Lecture, three hours. Requisite: course 131A or 131B. Varying topics of importance and relevance to Yiddish literary study. Reading and analysis of wide range of 19th- and 20th-century literature. P/NP or letter grading.

197. Individual Studies in Yiddish. (2 to 4) Tutorial, to be arranged. Limited to juniors/seniors. Individual intensive study or more specialized investigation of topics in Yiddish, 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

596. 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. Comprehensive Examination or Ph.D. Qualifying Examinations. (4) Tutorial, three hours. To be arranged with faculty member who directs examination preparation. S/U grading.

598. Research for and Preparation of M.A. Thesis. (4 to 12) Tutorial, three hours. To be arranged with faculty member who directs research for and preparation of thesis. S/U grading.


GERONTOLOGY

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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) introduces students to the field, (2) prepares them for advanced academic work, (3) lays the groundwork for careers involving a burgeoning aging population, (4) contributes to increased public awareness of issues regarding aging, and (5) helps students plan more effectively for their own futures as they and their families become older.

Undergraduate Study

The Undergraduate Council of the UCLA Academic Senate suspended admissions to the Gerontology minor effective Fall Quarter 2009. Continuing and transfer students were permitted to declare the minor by the end of Fall Quarter 2009. Students currently in the minor are not affected by the admissions suspension.

Gerontology Minor

To enter the Gerontology minor, students must have an overall grade-point average of 2.0 or better.

Required Upper Division Courses (28 units):
Gerontology M140 and six courses from M104C, M104D, M104E, M119O, M119X, M150, Community Health Sciences 90, Psychology M117J, 124G, 195A (only 8 units may be applied toward the minor; fieldwork placements must be approved by the chair of the minor), Women's Studies 185 (only when the special topic is women, health, and aging).

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 Social Welfare M104C and Women's Studies M104C) Lecture, four hours. Exploration of complexity of variables related to diversity of the aging population and variability in aging process. Examination of gender and ethnicity within context of both physical and social aging, in a multidisciplinary perspective utilizing faculty from a variety of fields to address issues of diversity. Letter grading.
M104D. Public Policy and Aging. (4) (Same as Social Welfare M104D.) Examination of theoretical models and concepts of the policy process, with application to aging policy. Description of decision-making processes that affect policy. Description of history of contemporary aging policy. Exploration of current policy issues affecting aging policy. Description of history of concepts and theories about aging that affect aging policy. Description of history of key aspect of social gerontology. P/ NP or letter grading.

M104E. Social Aspects of Aging. (4) (Same as Social Welfare M104E.) Topics include theories of aging, economic factors, changing roles, social relationships, and special populations. Weekly seminars organized around a key aspect of social gerontology. P/ NP or letter grading.

M119O. Psychology of Aging. (4) (Same as Psychology M119O.) Required. 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. Sociology 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 Aging. (4) Lecture, three hours. Sexuality in aging from psychological, physiological, 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.

M140. Introduction to Study of Aging. (4) (Same as Social Welfare M140.) Lecture, three hours. Designed for juniors/seniors. Perspectives on major features of human aging — biological, social, psychological, and humanistic. Introduction to information on the range of influences on aging to prepare students for subsequent specialization. P/ NP or letter grading.

M142SL. Intergenerational Communication across Lifespan. (4) (Same as Social Welfare M142SL.) Lecture, three hours; discussion, one hour. Limited to juniors/seniors. What do you say to your parents in conversation? How do you talk to your grandparents? Does your baby talk well to 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 their lives. Introduction to psychological, intergenerational, 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.

195. Community or Corporate Internships in Gerontology. (4) Internship (appreciation community setting), eight hours. Requisites: courses M119O or M119X, M140. Limited to juniors/seniors. Internship in applications of gerontology in supervised setting in community agency or business. Students meet on regular basis with sponsor and provide periodic reports of their experience. Cummulating report required. May be repeated for credit, but only 8 units may be applied to degree with approval of minor chairman. Individual contract with supervising placement sponsor required. Information and contracts may be obtained from Gerontology Advising Office, 8631 Franz Hall. P/ NP or letter grading.

196. Research Apprenticeship in Gerontology. (2 to 4) Tutorial, three hours per week per unit. Requisites: courses M119O or M119X, and M140. Limited to juniors/seniors. Entry-level research apprenticeship with practical applications of gerontology through research under guidance of faculty mentor. Individual contract required. Information and contracts may be obtained from Gerontology Advising Office, 8631 Franz Hall. P/ NP or letter grading.

199A. Directed Research or Senior Project in Gerontology. (2 to 4) Tutorial, to be arranged. Requisites: courses M119O or M119X, and M140. Limited to juniors/seniors. Supervised individual research under guidance of gerontology faculty mentor. Cummulating paper required. May not be repeated for credit. Individual contract required. Information and contracts may be obtained from Gerontology Advising Office, 8631 Franz Hall. Letter grading.

199B. Guided Research or Senior Project in Gerontology. (4) Tutorial, to be arranged. Requisites: courses M119O or M119X, and M140. Limited to juniors/seniors. Supervised individual research under guidance of gerontology faculty mentor. Cummulating paper required. May be repeated for credit. Individual contract required. Information and contracts may be obtained from Gerontology Advising Office, 8631 Franz Hall. P/ NP grading.

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Alien J. Scott, Ph.D. (Geography, Public Policy)
William R. Summerhill, Ph.D. (History)
Dominic R. Thomas, Ph.D. (Comparative Literature, French and Francophone Studies)
Amy B. Ziegart, Ph.D. (Public Policy)

Scope and Objectives
The Global Studies major provides undergraduate students with a rigorous interdisciplinary education in the principal issues confronting today’s globalized world. 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 the larger processes of transculturation in contemporary 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 inter-state warfare (ethnic conflict, terrorism, civil wars). Markets courses address the interactions among global, regional, national, and sub-national economic processes and market dynamics, their effects on different societies with respect to economic growth, poverty, inequality, 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 an 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 B.A.
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. Global Studies premajors must apply for the major at the end of Fall Quarter of their junior year.
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 statistics course selected from Political Science 6, 6R, Statistics 10, 11, or 12; 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 9, Comparative Literature 1C or 2C, 1D or 2D, Ethnomusicology 25, Geography 3, 6, History 1B, 2B, or World Arts and Cultures 20; (2) one government and conflict course selected from History 22, Political Science 10, 20, 30, 50, 50R, or Sociology 1, and (3) one markets course selected from Economics 1, 2, or Geography 4. 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 cultural category: Asian 70C, French 14, 14W, Italian 42A, 42B, Near Eastern Languages 50C, Russian 90B, 90BW, Spanish 42, 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 at http://www.admissions.ucla.edu/prospect/adm_tr.htm 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 around 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 35 to 50 pages.

**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 9, Asian 70C, Comparative Literature 1C or 2C, 1D or 2D, Ethnomusicology 25, French 14, 14W, Geography 3, 6, History 2B, Italian 42A, 42B, Near Eastern Languages 50C, Russian 90B, 90BW, Spanish 42, 44, World Arts and Cultures 20, (b) government and conflict — History 22, Political Science 10, 20, 30, 50, 50R, Sociology 1, and (c) markets — Economics 1, 2, Geography 4.


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).

No more than two upper division courses (8 to 10 units) may be applied toward both this minor and a major or minor in another department or program.

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

The field of health services 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 services, with a focus on populations rather than individual patients.

The Department of Health Services offers both practice-oriented and research-oriented graduate programs. The primary professional degree, the Master of Public Health (M.P.H.), includes training in various aspects of health administration, such as policy formulation, health planning, organization, and management. For more advanced professional work, the Dr.P.H. degree offers education in the full scope of public health services and prepares candidates for leadership in community health work at all jurisdictional levels. For information on the M.P.H. and Dr.P.H. and concurrent degree programs, see Public Health Schoolwide Programs.

For those interested in careers in research and teaching, the department offers M.S. and Ph.D. degrees in Health Services. These programs maintain close ties with related 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, http://www.gdnet.ucla.edu/gasas/library/pgmqrintro.htm. 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 Services offers Master of Science (M.S.) and Doctor of Philosophy (Ph.D.) degrees in Health Services.

Health Services

Upper Division Courses

100. Health Services Organization. (4) Lecture, four hours; discussion, one hour. Preparation: 4 units of social sciences. Structure and function of American health care system; issues and forces shaping its future. P/NP or letter grading.


C121. Tobacco: Prevention, Use, and Public Policy. (4) Lecture, four hours. Designed for juniors/seniors. Study of tobacco use and its health consequences, including interplay of historical, biological, sociocultural, political, and economic forces with knowledge, attitudes, and behavior choices of individuals. Introduction to prevention interventions, cessation interventions, anti-tobacco efforts in U.S., and international trends in tobacco use. Concurrently scheduled with course CM221. Letter grading.

140. Foundations of Maternal and Child Health. (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 understanding health disparities and implications for policy and practice. 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 to 6 each) Lecture, four to six hours; discussion, two hours. Limited to graduate health services students. In-depth analysis of health systems in U.S. using relevant theories, concepts, and models. S/U or letter grading.

M202. Qualitative Research Design and Methodology for Indigenous Communities. (9) (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 re-searching topics. Letter grading.

M204A-M204B-M204C. Seminars: Pharmaceutical Economics and Policy, (1-1-2) (Same as Economics M204L-M204M-M204N.) Seminar, three hours every other week for three terms. Requisites: course M236, Economics 201A, 201B, 201C. 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 (M204A, M204B) and S/U or letter (M204C) grading.

205. Pharmacological 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.


207. Current Topics in Health Services: Practice and Policy Perspectives. (2) Formerly numbered 207A-207B-207C.) Seminar, two hours. Required of Dr.P.H. students. Examination and discussion of current health services topics in various practice sectors, with focus on organizational leadership and direction in addressing these issues. Journal club discussions of relevant scientific literature, presentations of dissertation work by advanced Dr.P.H. students, and interactive lectures and discussions on current policy issues. Letter or pass/fail 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 they actually function 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 improving quality, efficiency, profitability, performance, and quality of healthcare services. Quality improvement (QI) techniques such as performance measurement, rapid cycle testing, breakthrough series, and interorganizational collaboration benefit quality and productivity. Letter grading.

CM221. Tobacco: Prevention, Use, and Public Policy. (4) (Same as Community Health Sciences M223.) Lecture, four hours; discussion, two hours. Prerequisites: courses 100 and 200A; open to juniors/seniors and graduate students. Study of tobacco use and its health consequences, including interplay of historical, biological, sociocultural, political, and economic forces with knowledge, attitudes, and behavior choices of individuals. Introduction to prevention interventions, cessation interventions, anti-tobacco efforts in U.S., and international trends in tobacco use. Concurrently scheduled with course C121. Letter grading.

225A-225B. Health Services Research Design. (6-6) Lecture, four hours; laboratory, two hours. Limited to departmental M.S. and Ph.D. students. Letter grading.

225A. Introduction to scope of health services research, conceptualization 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 conducting health services research, alternative 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. Prerequisite: course 225A. Development of conceptual models for health services research, identification of primary data sources, study design, and its operationalization through regression models.

226A-226B. Readings in Health Services Research. (2-2) Seminar, two hours. Limited to departmental M.S. and Ph.D. students. Introduction to research literature in health services research, including literature on key conceptual models, classic empirical studies, and current research illustrating cutting-edge methods or findings. In Progress (M204A) and S/U grading.


232. Leadership Capstone Seminar. (2) (Not same as course 234.) Fall. Offered every two years. Seminar, two 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 broad introduction to literature on skills, 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 for further development. Letter grading.

233. Health Policy Analysis. (4) (Same as Community Health Sciences M252.) Lecture, three hours. Requisites: courses 100 or 200A, M236, M287. Conceptual and practical analysis of health policy, emphasizing role of analysis during various phases of lifecycle of public policy. Letter grading.

234. Health Services Organization and Management Theory. (4) (Same as Community Health Sciences M252L.) Lecture, four hours; preparation: two upper division social sciences courses. Requisite: course 100. Application of contemporary organization and management theory to systems that provide personal healthcare services. Environmental characteristics, microeconomic issues, organizational design, and empirical investigation of leadership characteristics of successful leaders. Students evaluate their own leadership style and identify opportunities for further development. Letter grading.

235. Law, Social Change, and Health Policy. (4) (Same as course C121.) Lecture, four hours; discussion, two hours. Preparation: two upper division social sciences courses. Requisite: course 100. Legal issues affecting policy formulation for environmental, preventive, and curative health service programs. S/U or letter grading.

236. Microeconomic Theory of Health Sector. (4) (Same as Public Policy M236.) Lecture, four hours. Prerequisites: courses 100, M232, M242. Determinants of health, economics of lifecycle of public policy. Letter grading.

237A. Special Topics in Health Services Research Methodology. (4) Seminar, two hours. Prerequisites: courses 100 or ongoing research projects by faculty and students, with discussion to determine relevant methodological and policy issues, as well as to offer constructive criticism. S/U or letter grading.

238. Health Services Research Standards. (4) Seminar, two hours. Prerequisites: courses 200A, 200B, M422, Biostatistics 100A, 100B. Designed for graduate students. Participation of students in critical review and discussion of selected papers dealing with course topics, including small and large area variations in care, and development and implementation of clinical guidelines. Emphasis on implications for health policy. Letter grading.
M249L. Ethical Issues in Public Health. (2 or 4) (Same as Community Health Sciences M249L.) Lecture, two hours (M.P.H. day program) or four hours (M.P.H. for Health Professionals). Requisites: courses 200A, 200B. Case conferences, based on real-life experience, focus on ethical issues in health services organization and practice. Understanding ethical issues related to conflict of interest, quality of care, health insurance selection, choice of drugs, reproductive rights, AIDS, and resource allocation. Letter grading.

249M. Review of Current Health Services Management Literature. Lecture, three hours. Designed to help students remain current on recent developments in health services management and to place these current developments in proper context of academic research and public policy. Letter grading.

249N. Accessing, Analyzing, and Presenting Healthcare Management Data. (2) Lecture, two hours. Designed to provide first-year M.P.H. health professional students with scientific review process, systematic literature review and organizational aspects of implementing evidence-based practice and set of tools and methods to apply evidence base to improving healthcare quality. Letter grading.

249O. Tobacco and Public Policy. (4) Lecture, four hours. Information and analysis of principal issues in tobacco control. As administrators, researchers, and activists in field of tobacco control, professionals in all specialties must understand that public health should be fully informed on strategies to combat worldwide tobacco epidemic. Letter grading.

249Q. Editorial Board Apprenticeship. (2) (Same as Psychiatry M210.) Seminar, two hours. Designed for postdoctoral fellows and advanced Ph.D. 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.

249R. Cancer Prevention and Control Research. (2) Seminar, two hours. Limited to graduate students. Presentations by faculty members and outsiders, as well as students, on research topics in cancer prevention and control as well as career development issues such as grant writing. Scientific review process, systematic literature review and funding sources, writing grants, and publishing findings. S/U or letter grading.

260A-260B. World Health. (2-2) Lecture, two hours. Designed for graduate students. Overview of world health, with emphasis on healthcare outside the U.S. Key areas include burden of infectious diseases, health economics, and impact of healthcare policy on healthcare delivery. In Progress (260A) and letter (260B) grading.

265. Challenges in Clinical Health Services Research. (4) Lecture, four hours. Requisites: courses 200A, 200B. Designed to prepare students for challenges of navigating data for healthcare management, as well as written and oral presentation of those results. Letter grading.


289. Healthcare Disparities. (4) Seminar, three hours. Limited to graduate students. Exploration of ways to eliminate and reduce disparities in healthcare. Emphasis on understanding history of disparities in U.S. to understand current state of disparities, and on effective strategies for addressing them, such as increasing insurance coverage and delivery of culturally competent healthcare. Examination of sociological models that explain disparities in healthcare and evaluation and expansion on these models. Letter grading.

290. 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 development outcomes. Concepts of developmental vulnerability, approaches to assessment, models of service delivery, evaluation and cost-benefit issues, funding, and other policy issues. Letter grading.


401. Public Health Informatics. (4) Lecture, three hours. Preparation: general familiarity and understanding of basic information technologies. Recommended requisites: courses 251. Introduction to field of public health informatics and examination of impact of information technology on 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 how to make use of summer internship. Overview of political science learned earlier to be used to analyze problems with existing medicare program and to develop specific options for reforming features of program to accomplish cancer control goals. Conceptualization/preparation, development of possible strategies for addressing those challenges. Letter grading.

286. American Political Institutions and Health Policy. (4) Lecture, three hours; discussion, one hour. To effectively understand healthcare policy, one must understand the political process, from the point of view of the system itself. Exploration of aspects of health services policy process, including effect 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. 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. Focus on particular topics in cancer prevention and control in federal agencies, professionals in all specialties. Review of current health services management literature and interactive case discussions, introduction to interactive discussion, one hour. Requisites: courses 200A and 200B, or Community Health Sciences 210. Examination of roles of health policy experts in implementing evidence-based practice and set of tools and methods to apply evidence base to improving healthcare quality. Letter grading.

M287. Politics of Health Policy. (4) (Same as Community Health Sciences M287.) Lecture, three hours; discussion, one hour. Requisites: courses 200A and 200B, or Community Health Sciences 210. Examination of roles of health policy experts in implementing evidence-based practice and set of tools and methods to apply evidence base to improving healthcare quality. Letter grading.

M428. 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 process involved in major issues facing maternal and child health in Los Angeles County. Focus on specific 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 practice experiences, and underscore community leadership concepts demonstrated by those CBOs. S/U or letter grading.

430. New Developments in E-Health and Internet. (4) Lecture, four hours. Introduction of new technologies in healthcare e-commerce/Internet/new media arena, with emphasis on general background, review of applicable law and regulation, and discussion of organizational and managerial issues dealing with successful use and implementation of technologies. S/U or letter grading.

431. Organizational Behavior and Human Resources in Health Care 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 resources skills required by managers. Unique features of health services organizations stressed as applications are presented. Letter grading.

432. Management of Healthcare Delivery Organizations. (4) Seminar, four hours. Preparation: summer internship. Summer internship required. Leadership and managerial issues encountered by healthcare delivery organizations, including unique financial characteristics of healthcare facilities, third-party reimbursement, cost finding and rate setting, operational and capital budgeting, auditing, and risk management. S/U or letter grading.


436. Healthcare Financial Management. (4) Lecture, two hours; discussion, three hours; courses 234, 436A, 436B. Application of financial management and accounting principles to healthcare facilities, including unique financial characteristics of healthcare facilities, third-party reimbursement, cost finding and rate setting, operational and capital budgeting, auditing, and risk management. S/U or letter grading.


438. Issues and Problems of Local Health Administration. (4) Lecture, three hours. Preparation: one healthcare services course. Requisite: course 100, Epidemiology 100. Overview of administrative issues currently affecting public health departments, including 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, three to four hours. Requisite or corequisite: Biostatistics 100A, Epidemiology 100. In-depth examination of several specific dental care policy issues: manpower, rela-

tionship of treatment to disease, national health program strategies, and evaluation mechanisms. Letter grading.

440A. Healthcare Information Systems and Technology. (4) Lecture, four hours. Preparation: completion of summer internship. Provides strong foundation in health information technology (HIT) for those working in healthcare field with emphasis on development of knowledge and skill to plan, manage, and implement HIT systems in healthcare delivery organizations with clinical and business partners and evolving HIT spaces. Background and evolution of HIT; how it is planned, implemented, and managed; and how it can be productively used by healthcare delivery organizations, external research organizations, regulatory organizations, providers, and patients/consumers. Fundamentals of technology, electronic medical records (EMR), electronic health records (EHR), personal health records (PHR), meaningful use, interoperability, and health information exchanges (HIE). Letter grading.

440B. Health Information Systems: Organization and Management. (4) Lecture, two hours; laboratory, three hours. Requisite: course 440A. Health and administrative research using clinical records. Principles of planning for routine and special studies. Individual investigation in methods of obtaining and processing data to meet needs of programs in institution and agency. Introduction to principles of medical auditing and analysis of medical and health services. S/U or letter grading.


M449A-M449B. Child Health, Programs, and Policies. (4-4) (Same as Community Health Sciences M436A-M436B.) Lecture, four hours. Requisite: course 100. Course M449A is required to M449B. 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 children. 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 not be applied toward minimum graduate course requirement. S/U grading.

599. Doctoral Dissertation Research. (2 to 12) Tutorial, to be arranged. May not be applied toward any degree or course requirements. May be repeated for credit. S/U grading.
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 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 Ph.D. degree in History (a master's degree may be earned in the process of completing Ph.D. requirements). Traditionally, the M.A. and Ph.D. 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 B.A.

Capstone Major

The History Department’s 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 97G.

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 the undergraduate counseling office before enrolling in any courses for the major.

Refer to the UCLA Transfer Admission Guide at http://www.admissions.ucla.edu/prospect/adm_tr.htm 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 history courses.

Honor Program

The honors program is designed for History majors who are interested in completing a yearlong 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 198A, 198B, and 198C. The honors thesis must be completed in three terms, on the basis of work carried out in History 198A, 198B, and 198C. Students must register their intention to undertake an honors thesis early in their undergraduate careers. 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 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, 2D, 3A through 3D, Philosophy 8.

Required Upper Division Courses (20 units): Five courses from Anthropology 182, 183, History 179A through 180C, any upper division Honors Collegium courses with history of science or history of medicine content, Neurobiology M168 (or Physiological Science M168), 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 adviser, must involve writing a research or interpretative paper of significant length and intellectual content. No more than one upper division course may be applied toward both this minor and a major or minor in another department or program. Transfer credit for courses may be subject to departmental approval.

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, http://www.gdnet.ucla.edu/gasas/library/pgmrqintro.htm. 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 (M.A.), Candidate in Philosophy (C.Phil.), and Doctor of Philosophy (Ph.D.) degrees in History.

History

Lower Division Courses

1A-1B-1C. Introduction to Western Civilization. (5-5-5) Lecture; three hours; discussion; two hours. Broad, historical study of major elements in Western heritage from the world of the Greeks to that of the 20th century, designed to further beginning students’ general education, introduce them to ideas, attitudes, and institutions basic to Western civilization, and acquaint them, through reading and critical discussion, with representative contemporary documents and writings of enduring interest. P/NP or letter grading.

1A. Ancient Civilizations, Prehistory to Circa A.D. 843; 1B. Circa A.D. 843 to Circa 1715; 1C. Circa 1715 to Present

1A1-1B1-1C1. Introduction to Western Civilization (Honors). (5-5-5) Lecture; three hours; discussion; two hours, Honors sequence parallel to courses 1A, 1B, 1C. P/NP or letter grading.

1AH-1BH-1CH. Introduction to Western Civilization, Prehistory to Circa A.D. 843 (Honors); 1BH. Circa A.D. 843 to Circa 1715 (Honors); 1CH. Circa 1715 to Present (Honors).

2A. Power, Ethics, and Technological Change. (4) Lecture, three hours; discussion, two hours. Examination of historical and theoretical relationships between ethical behavior, corporate power, and technological change. Topics include engineering practice and business profits, gender and engineering cultures, product liability and consumer safety, and engineering and computer ethics. Historical case studies include Three Mile Island, Chernoby, the DC-10, and Challenger Disaster. 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 social knowledge, social activism, social movements, and religion demonstrate its rising intellectual and practical significance. P/NP or letter grading.

2C. Religion, Occult, and Science. (5-5) Lecture, three hours; discussion, two hours. P/NP or letter grading.

2C1. Religion, Occult, and Science. (5-5) Lecture, three hours; discussion, two hours. P/NP or letter grading.

2C2. Religion, Occult, and Science. (5-5) Lecture, three hours; discussion, two hours. P/NP or letter grading.

2C3. Religion, Occult, and Science. (5-5) Lecture, three hours; discussion, two hours. P/NP or letter grading.

2D. Science, Magic, and Religion. 1600 to Present. (5) Lecture, three hours; discussion, two hours. Science and religion as historical phenomena that have evolved over time, state of their respective historical developments and interactions. P/NP or letter grading.

2E. Science, Magic, and Religion. 1600 to Present. (5) Lecture, three hours; discussion, two hours. P/NP or letter grading.

2F. Science, Magic, and Religion. 1600 to Present. (5) Lecture, three hours; discussion, two hours. P/NP or letter grading.

3A-3B-3C. Introduction to 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. Scientific Revolution. (5) Lecture, three hours; discussion, two hours. Survey of beginnings of physical sciences involving transformation from Aristotelian to Newtonian cosmology, mechanization, natural world, rise of experimental science, and origin of scientific societies. P/NP or letter grading.

3B. History of Science from Newton to Darwin. (5) Lecture, three hours; discussion, two hours. How Western cosmologies became part of Enlightenment campaign for reason and of culture of an Industrial Revolution. New social science and evolutionary debates about science and religion demonstrate its rising intellectual and practical significance. P/NP or letter grading.

3C. History of Modern Science, Relativity to DNA. (5) Lecture, three hours; discussion, two hours. Ranging from starting new physics of relativity and the quantum 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.

3D. Themes in History of Medicine. (5) Lecture, three hours; discussion, two hours. Exploration of medical thought and practice of early modern medicine, medicine for the poor, and changing populations. P/NP or letter grading.

4. Introduction to History of Religions. (5) 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.

8A. Colonial Latin America. (5) Lecture, three hours; discussion, two hours. General introduction to Latin American history from contact period to independence (1490s to 1820s), with emphasis on convergence 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. Political Economy of Latin American Underdevelopment, 1750 to 1930. (5) Lecture, three hours; discussion, two hours. Interaction of pre-capitalist and modern modes of social organization in Latin American history. Themes include: transformation of colonial institutions and societies; and emergence of local and national identities. Readings focus on Latin American men and women from the period studied. P/NP or letter grading.

8BH. Political Economy of Latin American Underdevelopment, 1750 to 1930 (Honors). (5) Lecture, three hours; discussion, two hours. 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 movement suggestive 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.

10A-10BH, History of Africa (Honors). (5-5) Lecture, three hours; discussion, two hours. P/NP or letter grading.

10D, History of the Near and Middle East. (5) Lecture, three hours; discussion, two hours. Introduction to history of Middle East from rise of Islam to the present day. P/NP or letter grading.

105A-105B-105C, History of the U.S. and Its Colonial Origins. (5-5-5) Lecture, three hours; discussion, two hours. Examination of earliest civilizations of Asia, North Africa, and Europe — Mesopotamia, Egypt, Israel, India, China, Greece, and Rome — from development of settled agricultural communities until about A.D. 500, with focus on rise of cities, organization of empires and states, writing and growth of bureaucracy, varieties of religious expression, and linkage between culture and society. P/ NP or letter grading.

105D. Assyrians. (4) Same as Ancient Near East M104D. Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Introduction to history of Assyrian culture and its impact on the world. P/NP or letter grading.

105G, African History. (5) Same as Ancient Near East M104G. Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Study of political and cultural institutions of ancient Egypt and ideas on which they were based. P/NP or letter grading.

105H, Southeast Asian History. (5-5) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Examination of specific historical themes from world historical perspective. May be repeated for maximum of 16 units with topic and/or instructor change. P/NP or letter grading.

108. Sophomore Seminars: History. (4) Seminar, three hours. Limited to maximum of 20 lower division students. Readings and discussions designed to introduce students to current research in discipline. Fulfilling project may be required. P/NP or letter grading.

11A-11B. History of China. (5-5) Lecture, three hours; discussion, two hours. History of China from earliest times to late 18th century. P/NP or letter grading.

11A-11B, History of China (Honors). (5-5) Lecture, three hours; discussion, two hours. Honors sequence parallel to courses 11A, 11B. P/NP or letter grading.


12, World History to A.D. 600. (5) Lecture, three hours; discussion, two hours. Examination of earliest civilizations of Asia, North Africa, and Europe — Mesopotamia, Egypt, Israel, India, China, Greece, and Rome — from development of settled agricultural communities until about A.D. 500, with focus on rise of cities, organization of empires and states, writing and growth of bureaucracy, varieties of religious expression, and linkage between culture and society. P/ NP or letter grading.

21. World History, Circa 600 to 1750. (5) Lecture, three hours; discussion, two hours. Outline of world history from rise of Islam to start of Industrial Revolution, structured around a broad chronological narrative of salient developments. Use of thematic and comparative approaches, with certain recurring themes and institutions that modulate from culture to culture. Reading of variety of contemporary accounts to look at way people perceived cultures outside their own. P/NP or letter grading.

22, Contemporary World History, 1750 to Present. (5) Lecture, three hours; discussion, two hours. Broad examination of developments from mid-18th century (1750) to the present day. 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 more in-depth work in history of specific regions or countries of the world. P/NP or letter grading.

88GE, Junior Colloquium: Special Topics in History. (4) Same as Ancient Near East M104GE. Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Study of topics not covered in regular courses. May be repeated for maximum of 16 units with topic and/or instructor change. P/NP or letter grading.

95A, Survey of U.S. History. (4-4-4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Survey of social, political, and economic development of the United States from earliest times to the present day. P/NP or letter grading.

95B, History of the World Pre-Industrial Revolution. (4-4-4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Survey of social, political, and economic development of the world before the Industrial Revolution. P/NP or letter grading.

96W. Introduction to Historical Practice. (5) Seminar, three hours. Enforced requisite: English Composition 3 or 3H or English as a Second Language 3E. Not open for credit to students with credit for course 10B or 10BW. Course is parallel to 10B. P/NP or letter grading.

96R, Historical Research Methods and Strategies. (1) (Formerly numbered 95.) Seminar, one hour. Development of competency with identifying, locating, critically evaluating, and using primary materials and secondary sources. Use of various research techniques. Flow of information in variety of disciplines, how to approach research problems systematically, how to access and evaluate information in a variety of formats, and how to formulate effective searches and search in electronic databases and on the Internet. P/NP or letter grading.

97A. Introduction to Historical Practice: Variable Topics. (4 each) Seminar, three hours. Discus- sion course designed for no more than 15 students. Introduction to study of history, with emphasis on historical theory and research methods. Variable topics courses; con- sult Schedule of Classes for topics to be offered in specific term. P/NP or letter grading.

97F, Medieval History; 97C, European History; 97D, U.S. History; 97E, Latin American History; 97F, Near Eastern History; 97G, East Asian History; 97I, History of Science and Technology; 97L, Jewish History; 97M, History of Religion; 97T, Jewish History; 97N, Southeast Asian History; 97I, Indian History; 97O, World History.

Upper Division Courses

100. History and Historians. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/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. Examination of specific historical themes from world historical perspective. May be repeated for maximum of 16 units with topic and/or instructor change. P/NP or letter grading.

102. Explorations in Psychoanalysis and History. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Study of recent writings in field of psychohistory. P/NP or letter grading.

103A-103B. Ancient Egyptian Civilization. (4-4) Same as Ancient Near East M103A-M103B. Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. P/NP or letter grading. M102A, World Perspective. Historical archaeology requires appreciation of historical context of broad perspectives, and material culture. Thematic emphasis, with exploration of breadth of discipline both in Old World and Americas. M102B, American Perspective. Emphasis on historical archaeology in North America, particularly to some practical applications. P/NP or letter grading.

104A. History of Ancient Mesopotamia and Syria. (4) Same as Ancient Near East M104A. Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Political and cultural institutions of ancient Egypt and ideas on which they were based. P/NP or letter grading.

104D. Assyrians. (4) Same as Ancient Near East M104D. Lecture, three hours. Overview of Assyrian cultural history from its origins to end of Neo-Assyrian period (circa 612 B.C.E.), with focus on rise, mechanisms, and decline of Neo-Assyrian Empire, which at its peak ruled ancient Near East from Zagros to Egypt. P/NP or letter grading.

105A. Survey of Middle East, 500 to Present. (4-4-4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Background and circumstances of rise of Islam, creation of Islamic Empire, and its development. Rise of Dynastic Successor States and Modern Nation States. Social, intellectual, political, and economic development. P/NP or letter grading. M105A, 500; 105B, 1300 to 1700; 105C, 1700 to Present.
106A. Premodern Islam. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Examination of early development of Islam with special attention to doctrine of nature of God, human responsibility, guidance, revelation and religious authority, duties of believers, ritual, law, sectarian movements, mysticism, and popular religion. P/N or letter grading.

106B. Religion and Society in Modern Middle East. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Redefinition of religion in modern context. Emergence of modern Islamic movements, and transformation of meaning and function of religion in society. P/NP or letter grading.

107A-107B-107C. Armenian History. (4-4-4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. P/NP or letter grading. 107A. Armenia in Ancient and Medieval Times, 2nd Millennium B.C. to A.D. 11th Century; 107B. Armenia from Cilician Kingdom through Periods of Foreign Domination and National Struggles, 11th to 19th Centuries; 107C. Armenia in Modern and Contemporary Times, 19th and 20th Centuries. Armenian question and genocide, national republic, Soviet Armenia, and dispersion.

107D. Introduction to Armenian Oral History. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Survey of oral traditions and their significance. Techniques of Armenian oral history; preinterview, interview, and postinterview procedures; methods of compilation and evaluation. Field assignments, interviews, and preparation of oral papers based on interviews. P/NP or letter grading.

107E. Caucasus under Russian and Soviet Rule. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Survey of political, economic, social, and cultural history of Caucasus region since 1801. Georgian, Armenian, and Azerbaijani response to Russian and Soviet rule; nationality question and Soviet national republics. P/NP or letter grading.

108A. History of North Africa from Islamic Conquest. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Survey of political, social, economic, and religious history of Islamic Maghrib from Muslim conquest in 7th and 8th centuries C.E. until 1578. P/NP or letter grading.

108B. History of Islamic Iberia. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Survey of political, social, economic, religious, artistic, and literary history of Islamic culture in Western Europe. P/NP or letter grading.

M108C. Culture Area of Maghrib (North Africa). (4) (Same as Anthropology M171P and Arabic M171.) Lecture, three hours. Designed for juniors/seniors. Introduction to North Africa, especially Morocco, Algeria, Tunisia, and Libya, also known as Maghrib or Tamazgha. Topics include changing notions of person, tribal, ethnic, linguistic and religious identities; colonialism; gender and legal rights, changing representations of Islam, and religions in region's public spaces. P/NP or letter grading.

109A. Early Modern State in Mediterranean. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Emergence of phenomenon called early modern state in Ottoman Empire from 1450 to 1700. Exploration of main themes and developments in politics and economy of early modern Mediterranean. P/NP or letter grading.


C109C. Israeli Legal History. (1 to 5) Lecture, three hours. Israel is settler society inspired by utopian ideology but based on war and violence. Like U.S., Israel is imperfect democracy committed to notions of equality yet divided along class, gender, and ethnic lines. Legal system plays role in shaping identity, framing political discourse, and mediating social conflicts. How do law and society interact in Israel and how can Israeli experience illuminate themes common to both jurisdictions? Introduction to Israeli history and legal history, with focus on three periods: late Ottoman, British mandate, and first two decades after Israeli independence. Topics include legal reforms in late Ottoman period, reception of English law after British conquest, law and national identity, postindependence legal change and constitutional structure. How do law and land influence, political ideologies on commercial law, gender, religion, and law, role of courts in shaping historical memory (Holocaust). Concluding examination will be scheduled with course CM209. P/NP or letter grading.

M110A-M110B-M110C. Iranian Civilization. (4-4-4) (Same as Ancient Near East M110A-M110B-M110C and Iran M110A-M110B-M110C.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Study of history and civilization of ancient Iran from rise of Elam to end of Sassanian dynasty — Elamite civilization and Mede, Achaemenid, Arsacid, and Sassanian Empires. Emphasis on ancient Iran, but may be offered for early Islamic period. P/NP or letter grading.

110D. History of Modern Iran, 1500 to Present. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Iran as distinct national unit, demystifying Iranian history and distinguishing its peculiarities, Safavid Empire, economy, imperialism, modernity, construction of Iranian state, religion and political ideologies in early modern and modern periods. P/NP or letter grading.

111A-111B-111C. Topics in Middle Eastern History. (4-4-4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. May be repeated for maximum of 16 units with topic and/or instructor change. P/NP or letter grading. 111A. Pre-modern. Examination of major issues in history of Middle East. 111B. Early Modern. Examination of Istanbul in Ottoman period (1453 to 1923); relationship between history and literary imagination and view of history as dialogue between past and present; scholarly debate over urban and modern Middle East; introduction to corpus of theories (world economy paradigm) through discussion of Ottoman port cities. 111C. Modern. Middle East underwent widespread social, economic, and cultural changes during 19th century that propelled society, at least portions of society and aspects of its social/cultural life, in entirely new direction. Examination of those changes to understand exactly what modernity meant for region.

112A-112B-112C. History of Ancient Mediterranean World. (4-4-4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. P/NP or letter grading. 112A. Survey of history of ancient East from earliest times to foundation of Persian Empire. 112B. History and institutions of Greeks from their arrival to death of Alexander. 112C. History and institutions of Rome from founding of city to death of Constantine.

112D. History and Monuments of Rome: Field Studies. (4) Fieldwork, three hours. Enforced corequisite: course 112B. Examination of history, art, and monuments of ancient Rome through daily lectures and field walks to museums and archaeological sites. Part of UCLA Summer Travel Program. P/NP or letter grading.

112E. History and Monuments of Rome: Field Studies. (4) Fieldwork, three hours. Enforced corequisite: course 112C. Examination of history, art, and monuments of ancient Rome through daily lectures and field walks to museums and archaeological sites. Field trips outside Rome to Pompeii, Hadrian's Villa, and ancient Ostia. Some attention to monuments and churches of medieval and Renaissance Rome in their historical context. Part of UCLA Summer Travel Program. P/NP or letter grading.

113A-113B. History of Ancient Greece. (4-4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. P/NP or letter grading. 113A. Rise of Greek City-State. Emphasis on aristocratic and democratic developments within the context of Greek Wars. 113B. Classical Period. Clash between Athens and Sparta, consequent rise of Macedonia, and aftermath of Alexander the Great.

114A-114B. History of Rome. (4-4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. P/NP or letter grading. 114A. To Death of Caesar. Emphasis on development of Roman Republic and on constitutional and social struggles of late republic. 114B. From Death of Caesar to Time of Constantine. Early empire treated in more detail, supplemented by survey of social and economic changes in 3rd century. Transformation of Classical World. Political, cultural, and religious history of Mediterranean in late antiquity, from crisis of Roman Empire in 3rd century to barbarian and Arab invasions at beginning of medieval states and societies in 7th century.


119C. Mediterranean Civilization: Medieval Heartland. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Survey of Western Mediterranean Europe, social/economic/political within framework, including its relation with other cultures. P/NP or letter grading.

119D. Topics in Medieval History. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Special topics in history of Middle Ages, including religion in society, justice and law, politics of war and diplomacy, economic upheaval and renewal, and cultural representations. May be repeated for maximum of 16 units with topic and/or instructor change. P/NP or letter grading.

120A-120B. East-Central Europe. (4-4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. P/NP or letter grading. 120A. Long 19th Century, 1780 to 1914. Analysis of social, political, economic, and cultural changes during 19th century that propelled society, at least portions of society and aspects of its social/cultural life, in entirely new direction. Examination of those changes to understand exactly what modernity meant for region.

120D. Film and History: Central and Eastern Europe, 1945 to 1989. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Postwar history of central and eastern 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. Reorganization of power, new forms of representation, and discourse about power in Europe from 15th through 16th century; popular culture; peasant society; refashioning of religion and power; localization. P/NP or letter grading.

121B. Baroque Culture and Absolutist Politics, 1660 to 1715. (4) Course, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Changing nature of state and social domination; redeployment 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. Enlightenment absolutism and reform, challenge of new political and economic ideas, crisis of Old Regime, impact of French Revolution and Napoleonic empire. 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-industrial Revolution, uprisings of 1848, unification of Germany and Italy, imperialism, rise of socialism, populism, growth of new social structures, origins 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, interwar period, 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 Fascism, 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 revolutions, current political configuration. P/NP or letter grading.

122A-122F. Cultural and Intellectual History of Modern Europe. (4 each) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Climates of taste and climates of opinion. Education and religious attitudes; thought, and manners of time in historical context. P/NP or letter grading. 122A. 15th Century. Renaissance cultural and intellectual history of Europe. Central themes include history of ideas, theory, and practice of art and architecture, civic and religious humanism, religious experience, and new cultural genres of history and philological scholarship. 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 models in transition to social and economic developments and growth of state. 123B. 1815 to 1945. Changing patterns of warfare and diplomatic attempts to contain Great Power rivalries; wars of national unification; imperialism; shifting balance of power and alliances; origins, course, and effects of two World Wars. 123C. Cold War. Relations of West, Soviet Union, and world from 1945 to 1991. Origins, development, and end of power-political, military, and ideological confrontations between superpowers and their allies and clients in Europe, Asia, and Latin America.

123A-124B-124C. History of France. (4-4-4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. P/NP or letter grading. 124A. France, 1500 to 1715. Social history of 16th and 17th centuries, social and political development from monarchy to republic to national socialism to dictatorship. P/NP or letter grading.

124B. 1715 to 1870. Consideration of absolutism as political system, 18th century; two world wars, shift from monarchy to republic to national socialism to dictatorship. P/NP or letter grading. 124C. 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 Central Europe from end of Thirty Years’ War to end of Napoleonic Wars. Consideration of 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-Century Germany. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Development of state institutions, culture, and society in Central Europe from end of Thirty Years’ War to end of Napoleonic Wars. Consideration of political system, and baroque and Enlightenment cultures as new discourses on power and hierarchy. P/NP or letter grading.

126. Europe in Age of Revolution, Circa 1775 to 1848. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Period of revolutions. Critical discourse leading to French Revolution, collapse of state, Napoleonic era, reconstruction of society through monarchies and revolutions of 19th century. 126A. France: Making of Modern France, 1871 to Present. From oligarchy to democratic bureaucracy in two wars and three republics.

127A. Origins to Rise of Muscovy. (4) Same as Russian 118A. Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Early Russian society; refashioning of religion and power; localizing history, art, monuments, and politics of Russia from ancient time to present. Daily lectures and field trips in and around Moscow and St. Petersburg; study cruise of Volga River to Tatarstan, Povet. UCRA Summer Travel Program. 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. 1350 to 1559. Most important social, economic, political, and cultural developments in history of Italy during later Middle Ages and Renaissance. 128B. 1559 to 1648. Counter-Reformation and absolutism. Enlightenment reforms, revolutionary era, and first phase of Risorgimento. 128C. 1848 to Present. Political, economic, social, diplomatic, and ideological developments.

128L. Italian Literature in Historical Context, 1559 to 1848. (1) Seminar, three hours. Designed for juniors/seniors and to be taken in conjunction with courses 128A-128B. Reading of texts in Italian selected from works that relate directly to material covered in course 128B. P/NP or letter grading.

129A-129B. Social History of Spain and Portugal. (4-4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. P/NP or letter grading. 129A. Age of Silver in Spain and Portugal, 1479 to 1789. Development of popular history in Iberian Peninsula. Emphasis on peasants and urban history. 129B. 1789 to 1939. Counter-Reformation and absolutism, Enlightenment reforms, revolutionary era, and first phase of Risorgimento. P/NP or letter grading.

130A-130B. Southeastern Europe. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. P/NP or letter grading. 130A. 1000 to 1800. Political and cultural survey of independent Balkan states in Middle Ages. 130B. 1500 to 1918. Balkans under Ottoman rule, movements of national liberation, and formation of nation states.
131A-131B. Marxist Theory and History. (4-4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Introduction to Marxist philosophy and method; conception of historical stages; competing Marxist analyses of transition from feudalism to capitalism; reading Capital to understand politics and state in relationship to historical interpretation of 19th-century European revolutions; capitalism crises. P/NP or letter grading.

132. Topics in European History. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Integrated introduction to important aspects of European history, with emphasis on specific topic within broad framework. May be repeat- ed for maximum of 16 units with topic and instructor change. P/NP or letter grading.

M133A-M133B. History of Women in Europe. (4-4) (Same as Women’s Studies M133A-M133B.) 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; M133B. 1715 to Present.

M133C. History of Prostitution. (4) (Same as Women’s Studies M133C.) 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.

134B-134C. Economic History of Europe. (4-4) Lecture, three hours; discussion, one hour (when scheduled). Designed for junior/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, political and economic structures, and interrelationship between Western core and European peripheries in process of industrialization. 134C. 20th Century. Changing European economy after World War I and II and in 1990s; impact of fourth and fifth Industrial Revolutions; Great Depression of century during 1930s, 1970s, and 1980s; and changing modernization strategies; import-substituting industrialization in peripheral countries; Soviet modernization dictatorship in Eastern Europe and its collapse; transition process of second half of century and rise of European Union; modernization of China and Japan.

135A-135B-135C. Europe and World. (4-4-4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. P/NP or letter grading.

135A. Exploration and Conquest, 1400 to 1700. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. First phase of European expansion in America, 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 development of European colonialism of world trade, impact of European colonialism in New World, Africa, and Asia, influence of new revolutionary ideals 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). Designed for juniors/seniors. Survey of major historical events and trends in the 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. British ideological landscape, economy, society, and polity, with focus on dynamics of both stability and change. P/NP or letter grading. 136A. Tudor-Stuart Times, 1485 to 1715. Political, social, economic, and cultural transformations of the British Isles in the age of Elizabeth and Stuarts. Topics include Reformation, transformation of economy, establishment of overseas colonies, 17th-century political upheavals and their impact on political structures. 136B. Making of Modern Britain, 1715 to 1867. Social, economic, political, and cultural history of Britain from American Revolution to wars of 1812. Rise of modern British state, industrial revolution, and social change under pressure of industrialization, emergence of first British Empire, loss of America, shifts in religious and social position. 136C. Modern Britain since 1870.

137A-137B. British Empire since 1783. (4-4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Political and economic development of Britain, including evolution of colonial nationalism, development of modern nation-state, and colonies crisis. P/NP or letter grading.


138B. Revolutionary America, 1760 to 1800. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Enquiry into origins and consequences of American Revolution, nature of revolutionary process, creation of constitutional 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, and 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 junior/seniors. Rise of sectionalism, anti-slavery 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 development of American economy from 1790 to 1910. During this period technical knowledge of modern industrial structure was formed. Why and how American economy evolved into dual economy, characterizable by concentration of economic influence and periphery of smaller firms. 141B. 1910 to Present. Dynamics of change in dual economy, with focus in greater detail on interrelationships between macro and micro levels of economy and in growing interdependence between U.S. and world economy from 1910 to present.


142C. History of Religion in U.S. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Examination of number of religious traditions that have been important in this country, with emphasis on role of religion in major social, political, and cultural developments. P/NP or letter grading.

143A-143B. Constitutional History of U.S. (4-4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. P/NP or letter grading. 143A. Origins and Development of Constitution. P/NP or letter grading. 143B. Constitutionalism Since Civil War. Particular emphasis on development of Supreme Court, due process revolution, Court and political questions, and fact of judicial supremacy within self-prescribed limits. P/NP or letter grading.

144A. America in World. (4) (Formerly numbered 144A.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Reconsideration of U.S. exceptionalist approach to national self-understanding by rethinking crucial aspects of American history in more international context that goes well beyond foreign relations and international affairs to reconceptualize aspects of American economic, intellectual, cultural, and political circumstances. Consideration of transnational flows of people, ideas, goods, wealth, and politics, as well as comparative studies of all these things and more. 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 history of facts and chronology, and awareness of major theoretical issues and fundamental concepts in urban history. 145B. Topics in U.S. History. Exploration of one aspect of U.S. urban history in depth focusing on attention to geography or geography. Topics include crime and police, urban economics, and urban government. Students do primary research papers based on local materials in addition to written examinations. May be repeated for maximum of 16 units with topic and instructor change.
146A-146B. American Working Class Movements. (4-4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Major episodes in social, trade union, and cultural history of American working class from Colonial times to present, with emphasis on both organized and unorganized labor, history of women, and of Labor, A.F. of L. and C.I.O. and development of labor politics. 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 North Atlantic (Europe), South Atlantic (Afro-Caribbean), Pacific (China/Japan/Hawaii), and Latin (Mexico to Brazil) worlds to allow for an interdisciplinary and comparative survey of American and comparative immigration from 1750 to present. Special focus on Southern California in course 146D. P/NP or letter grading.

147A-147B. American Social History. (4-4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Historical analysis of American society and culture, with emphasis on family, religious values, Afro-American life, women's work, urbanization and industrialization, immigration and nativism, and movements for social reform. P/NP or letter grading. 147A, 1750 to 1860; 147B, 1860 to 1960.

M147C. History of Women in Colonial British America and Early U.S., 1600 to 1860. (4) (Same as Women's Studies M147B.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Introduction to major themes in women's history from abolitionist, slavery, and Civil War to rise and consequences of second-wave feminism. 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 historical dimensions of culture change, and Indian political processes and continuity of Native American cultures. Focus on selected Indian peoples in each period. P/NP or letter grading. 149A, Precontact to 1830; 149B, 1830 to Present.

M150A, M150B, M150C. Introduction to Afro-American History. (4-4) (Same as Afro-American Studies M150B, M150C.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Examination of slavery experiences in various New World 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.

M150D. Recent African American Urban History: Funk Music and Politics of Black Popular Culture. (4) (Same as Afro-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 good time blues, jazz, rhythm and blues, soul, rock, and many other musical styles, offer students unique window into recent African American history. P/NP or letter grading.


M151A. History of Chicano Peoples. (4) (Same as Chicana and Chicano Studies M151A.) 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 Mexican descent (Indio-Mestizo-Muerto) of the U.S. from 19th century to mid-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 events. Within framework of domination and resistance, discussion deals with social structure, economy, labor, culture, political organization, conflict, and ideology. Development related to historical events of significance occurring both in U.S. and Mexico. Lectures, special presentations, reading assignments, written examinations, and oral presentation. P/NP or letter grading.

M151B. History of Chicano Peoples. (4) (Same as Chicana and Chicano Studies M151B.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Lecture course on historical development of Mexican (Chicano) community and people of Mexican descent (Indio-Mestizo-Muerto) of the U.S. from 19th century to mid-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 events. Within framework of domination and resistance, discussion deals with social structure, economy, labor, culture, political organization, conflict, and ideology. 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 M151C.) 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 the making of race in American history. Letter grading.

M151D. Chicana Historiography. (4) (Same as Chicana and Chicano Studies M151D and Women's Studies M151D.) Lecture, four hours. Examination of Chicana historiography, looking closely at how practice 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 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.


153. American West. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Study of West as frontier space, in context of Portuguese overseas expansion in Asia, Afri-
166A-166B. History of West Africa. (4-4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. 166A. West Africa, Earliest Times to 1800; 166B, West Africa since 1800.
166C. Social and Economic History of West Africa since 1600. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Analysis of main currents of West African social, cultural, and economic history since fall of Songhai Empire, with emphasis on family, religious values, education, urbanization, migration, and state trade. Roles of economic forces and institutions in promoting or inhibiting economic change in West Africa; ethnic diversity and sociopolitical integration; colonial economic systems and efforts at economic planning and development since 1950s. P/NP or letter grading.
167A. History of Northeast Africa. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Survey of history of central Africa from earliest times to present, with emphasis on economy and society, evolution of state, and significance 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. Focus on diversities of thought in classical legacy and their evolution under impact of Buddhism to 1000. Emphasis on ancient and premodern satire in postmodern comic books, American history. P/NP or letter grading.
167C. History of Central Africa. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Attention to social and economic as well as political aspects. P/NP or letter grading. 168A. Origins to 1870. Origins of South Africa and sociopolitical integration; colonial economic and political conditions within which Chinese orthodox influence and heterodox values evolved and changed. Evaluation of iconoclasms of Chinese intellectual life in 20th century in light of earlier currents of thought.
170A. Culture and Power in Late Imperial China. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Analysis of relations of power and cultural expressions of dominance and resistance in late imperial China (1000 to 1700), with emphasis on interplay of economic 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 discourses of body, personhood, and social identity; love, sexuality, and private life. P/NP or letter grading.
170B. Selected Topics in Chinese History from 1500-1900. Lecture, one hour (when scheduled). Recommended requisite: course 118. Designed for juniors/seniors. Selected topics that may vary from year to year. Recent offerings include law, society, and culture; society and economy; and rural China. May be repeated for maximum of 16 units with topic and/or instructor change. P/NP or letter grading.
170C. History of Women in China, A.D. 1000 to Present. (4) Same as Women's Studies M170C. Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Topics in Chinese history and family life, women in literati culture, feminist movement, and women and communist revolution. P/NP or letter grading.
171. Variable Topics in Japanese History. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Topics in Japanese history, including political change, economic development, social questions, and popular culture, as well as media and arts, explored through extensive readings. P/NP or letter grade letter grading.
172A-172B-172C. Japanese History. (4-4-4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Political, economic, and cultural development since postwar politics. P/NP or letter grading. 172A. Modern, 1600 to 1720; 172B. Early Modern, 1600 to 1688; 172C. Modern, 1688 to Present.
173A. Japanese Popular Culture. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Topics in 18th- and 19th-century Japanese history, including legacy of premodern satires in postmodern comic books, American modern satire in postmodern comic books, American
173B. Women in 20th-Century Japan. (4) Same as Women's Studies M173B. 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, including topics such as women and new political order (1900 to 1930), women, war, and empire (1930 to 1945), and women in consumer society (1930s-1990s). P/NP or letter grade letter grading.
173C. Shinto, Buddhism, and Japanese Folk Religion. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Social dimensions of variegated Shinto's connection with cultural nationalism, Buddhism's medi eval Reformation and Zen's relation to warrior culture, folk religious aspects such as shamanism, ancestor worship, and millenarianism. 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-174C. History of British India, I, II. (4-4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. 174B. Examination of expansion of British rule, theories and practice of governance, constitution of India as oriental despotic, epistemological projects of state, and other modes of British prevision of knowledge. 174C. Political economy of imperialism and Britain's civilizing mission. Encounter, especially in terms of race and gender, between colonized and colonizers and to questions of resistance and nationalism.
174D. Indo-Islamic Interactions, 700 to 1750. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. 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.
174E. Indo-Islamic Interactions, 1750 to 1950. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Examination of interplay of factors which, from Christian missionary is to Islamic madrasa schools and colonial rebellions, gave shape to multiformed Muslim reformation in cont- text of colour of scholars 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. Exploration of problem of identity, partition of India and emergent political, social, economic, and women's movements; struggle for rights and con- flicts of identity among Muslims, Hindus, and Sikhs; terrorism in Sri Lanka and Punjab; public culture, pop- ular cinema, and street life. P/NP or letter grading.

175B. Indian Identity in U.S. and Diaspora. (4) (Same as Asian American Studies M172A.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. History of overseas Indian communities; transformations of Hinduism in diaspora; emergence of new diasporic art forms such as bhangra rap and chutney music; relations between Indi- ans and other racial and ethnic groups; Indian wom- en as embodiment of Indian culture; diasporic identi- ties. P/NP or letter grading.

175C. Special Topics in Contemporary Indian His- tory. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Treatment of major issues in history of contemporary India. May be repeated for maximum of 16 units with topic and/or instructor change. P/NP or letter grading.

176A-176B. History of Southeast Asia. (4-4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Exploration of history of Southeast Asia's nation-states: Indonesia, East Timor, Thailand, Cambodia, Burma, Laos, Malaysia, Singapore, Brunei, Philippines, and Vietnam. P/NP or letter grading.

176C. Philippine History. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Overview of history of people of Vietnam to beginning of colonial period (cir- ca 1880), covering political, social, economic, cultural, and religious developments. Consideration of impact of Vietnamese past on modern age. P/NP or letter grading.

176E. Vietnam: Past and Present. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Survey of history and culture of Vietnam from about 700 B.C. to present, including political, social, and economic developments as well as international relations in post-1954 period. P/NP or letter grading.

177A. National Histories of Southeast Asia. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Exploration of theory of evolution, science and public policy and letters. Topics may include: theory of human rights in Southeast Asia, gender and sexuality in island Southeast Asia, and economic histo- ry of Southeast Asia. P/NP or letter grading.

177B. Comparative Histories of Southeast Asia. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Variable top- ics with focus on history of one or more of Southeast Asia's nation-states: Indonesia, East Timor, Thailand, Cambodia, Burma, Laos, Malaysia, Singapore, Brunei, Philippines, and Vietnam. P/NP or letter grading.

180A. Topics in History of Science. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Topics may include scien- ce and religion, science and science of origin of science, science in Enlightenment, development of theory of evolution, history of science and cultural history of peoples of Southeast Asia from earliest times to about 1815. 176B. Southeast Asia since 1815. History of modern Southeast Asia, with emphasis on expansion of European influence in politi- cal and economic life. P/NP or letter grading.


180C. Science and Religion. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Theories of nature, person of man of science, role of women in scientific revolution, scientific investigations of women and feminism. P/NP or letter grading.

180D. History of Religions: Myth. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Topics may include gods and goddesses, their origins and evolution. P/NP or letter grading.

180E. Religious Expulsion of Jews from Spain in 1492. (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.

181A. History of Medicine: Historic Roots of Heal- ing Arts. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Examination of introduction to traditions, practices, goals, and myths of Western healing professions from time of ancient Greeks to Renaissance. Topics range from Hip- pocratic Oath, Galen to Aristotle at Alexandria to healing at Epidaurus and Salerno, contributions of medieval Muslim and Jewish doctors, rise of healing profes- sions, medical facilities, nursing orders, and hospitals. P/NP or letter grading.

181B. History of Foundation of Modern Medicine. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Cultural, scientific, and social context that shaped modern medicine from Renaissance to Romantic era. Topics include establishment of anatomy, physiology, and modern clinical medicine, mapping of human body, medical approach to mental illness, rise of anatomico-clinical medicine at Paris School. P/NP or letter grading.

181C. Medicine and Society in 19th-Century Amer- ica. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Ther- apeutics, theories of disease, and medical science scrutinized with understanding that these are never value-neutral, but are shaped by social structures of which medicine becomes a powerful and over whom did they wield power in 19th century? P/NP or letter grading.

182A. Indian Identity in U.S. and Diaspora. (4) (Same as Jewish Studies M182A.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. History of overseas Indian communities; transformations of Hinduism in diaspora; emergence of new diasporic art forms such as bhangra rap and chutney music; relations between Indi- ans and other racial and ethnic groups; Indian wom- en as embodiment of Indian culture; diasporic identi- ties. P/NP or letter grading.

182B. Indian Intellectual History. (4-4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Exploration of un- derstanding of traditional forms of Jewish culture in modern age, particularly those that challenge tradition- al forms of Jewish religious culture (e.g., laws, customs). 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.

183C. History of Anti-Semitism. (4) (Same as Jewish Studies M183C.) 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.

184A. Jewish Civilization: Encounter with Great World Cultures. (4) (Same as Jewish Studies M184A.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Explo- ration 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.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Surveys of origins and historical development of anti-Semitism. P/NP or letter grading.

184C. American Jewish Experience. (4) (Same as Jewish Studies M184C.) Lecture, three hours; discus- sion, one hour (when scheduled). Designed for juniors/seniors. Experience of Jews in America, both historical and contemporary. P/NP or letter grading.

184D. History of State of Israel, 1948 to Present. (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 history of religion and culture. Example is selected from nonliterate as well as from other Asian and Euro- pean traditions. P/NP or letter grading.

185B. 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 religion of Veda; Brahmanism; (later) Hinduism. Consult Schedule of Classes for specifics. May be tak- en independently for credit. P/NP or letter grading.
185C. Religions of South and Southeast Asia. (4) Lecture, three hours; discussion, one hour (when scheduled). Requires: course 4 or 185A. Designed for seniors. Topics vary from year to year and include Buddhist in India; religions of Java and Bali; nonditec traditions of India and Southeast Asia. Con- sult Schedule of Classes for specifics. May be taken in- dependently for credit. P/NP or letter grading.

M185D. Religions of Ancient Near East. (4) Same as Ancient Near East M185D.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Systematic study of the origins of Early Christianity from the origins to circa 160 C.E., stressing its continuity/dis- continuity with Judaism, various responses to Jesus of Nazareth, writings produced during this period, move- ment of encounters with its religious, social, political, and intellectual world, and methods of research. P/NP or letter grading.

186A. History of Early Christians. (4) 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 Pharaohs, Qur- an, Buddha, Brahman, Confucius, traditional Greek and Roman religions, mysteries, astrology, magic, ghost- nism, and emperor worship. P/NP or letter grading.

186C. Jesus of Nazareth in Historical Research. (4) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Topics announced in Schedule of Classes and include ancient Germanic cults; Renaissance mysticism; mystics of low countries; goddesses; religion in secular age. May be repeated for maximum of 16 units with topic and/or instructor change. P/NP or letter grading.

188A. Global Feminism, 1850 to Present. (4) (Same as Women's Studies M186A.) Lecture, three hours; discussion, one hour (when scheduled). Designed for seniors. Studied by significant post-Enlightenment historical evaluations, students are led into thmselves 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.

189A. Christian Movement. (4) Same as Political Science M194DC and Sociology M195DC.) Seminar, four hours. Limited to 20 students enrolled in UC Washington Center programs. Designed for seniors. Study of problems of modern economics in the study, with scheduled meetings to be arranged be- tween student and instructor. Letter grading.

190A. Honors Research in History. (4) Tutorial, to be arranged. Course 190A is required. P/NP grading.

190C. Community and 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 in- structor and provide periodic reports of their experi- ence. May be repeated for credit. Individual contract with supervising faculty member required. P/NP grading.

190CE. Community and Corporate Internships in History. (4) Tutorial, to be arranged; fieldwork, eight to ten hours. Limited to juniors/seniors. Internship in corpo- rate, governmental, or nonprofit setting coordinated through Center for Social Theory and Research. Individuals 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 reading assign- ments that examine issues related to internship topic. May be repeated for credit with consent of Center for Community Learning. Individual contract with supervising faculty member required. P/NP grading.

191A. Historical Research. (4) Lecture, three hours. Limited to juniors/seniors. Individual intensive study, with scheduled meetings to be arranged between student and instructor. Assigned readings and tangible evidence of mastery of subject matter re- quired. May be repeated for credit. Individual contract required. P/NP or letter grading.

191B. Medieval Historical Research. (4) Tutorial, to be arranged. Course 191B is requisite to 198B, which is requisite to 198C. Limited to juniors/seniors. Development- of honors thesis or comprehensive research proj- ect under direct supervision of faculty member. May be repeated for maximum of 16 units. Individual contract required. Letter grading.

191C. Honors Research in History. (4) Tutorial, to be arranged. Requisite: course 191A. Limited to juniors/ seniors. Completion of honors thesis. Course 191A. Comprehensive research project under direct supervi- sion of faculty member. May be repeated for maximum of 16 units. Individual contract required. In Progress (credit to be given only on completion of course 198C).


191F. Directed Research in History. (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. History majors limited to 8 units. In- dividual contract required. P/NP or letter grading.

Graduate Courses

200A-200U. Advanced Historiography. (4 each) Seminar, three hours. May be repeated for credit. 200A. Ancient Greece; 200B. Ancient Rome; 200C. Medieval; 200D. Europe; 200H; 200L. Latin America; 200M. Near East; 200N. India; 200L. China; 200M. Mediterranean and the Islamic World; 200Q. History of Religion; 200R. Theory of History; 200S. Jewish History; 200T. Korean; 200V. Southeast Asia; 200W. Latin America; 200X. Africa; 200Y. Japan;

200N. Advanced Historiography: American Indian Peoples. (4) Same as American Indian Studies M202A.) Lecture, 90 minutes; seminar, 90 minutes. Introduction to culture-histories of North American Indi- ans and review of Indian concepts of history. Stereo- typical approach to content and methodologies related to Indian past that is interdisciplinary and multicultural in its scope. Letter grading.


200Y. Advanced Historiography: Application of Economics to History. (4) Discussion, three hours.

200Z. Advanced Historiography: Chicano. (4) Dis- cussion, three hours. Graduate survey of leading litera- ture on Chicano history. Focus on methodological and theoretical approaches in the field.

201A-201U. Topics in History. (4 each) Seminar, three hours. Graduate courses involving reading, lect- turing, and discussion of selected topics. May be re- peated for credit. When concurrently scheduled with course 191, undergraduates must obtain consent of in- structor to enroll. S/U or letter grading. 201A. Ancient Greece; 201B. Ancient Rome; 201C. Medieval; 201D. Early Modern Europe; 201E. Modern Europe; 201F. Russia/Eastern Europe; 201G. Britain; 201H. U.S.; 201J. Latin America; 201K. Near East; 201L. India; 201M. China; 201N. Japan; 201O. Africa; 201P. Sci- ence/Technology; 201Q. History of Religions; 201R. Theory of History; 201S. Jewish History; 201T. Arme- nia and Caucasus; 201U. Southeast Asia; 201V. Psy- chohistory.

202A-202B. Seminars: Comparative Modern Eco- nomic History. (4-4) Seminar, three hours. Course 202A is requisite to 202B. Designed for graduate stu- dents. Study of problems of modern economics in the 19th and 20th centuries. Topics include industrialization, growth, demography, development, and economic change. In Progress (202A) and letter (202B) grading.

202A-202B. Social Theory and Comparative History. (4-4) (Same as Political Science M291A- M291B and Sociology M296A-M296B.) Seminar, three and one-half hours every other week. Introduction to historically rooted social theory and theoretically sensi- tive history, following program of Center for Social The- ory and Comparative History. Each course may be tak- en independently for credit. S/U or letter grading.

2023A-M202B. Social Theory and Comparative History. (4-4) (Same as Political Science M291A- M291B and Sociology M296A-M296B.) Seminar, three and one-half hours every other week. Introduction to historically rooted social theory and theoretically sensi- tive history, following program of Center for Social The- ory and Comparative History. Each course may be tak- en independently for credit. S/U or letter grading.

203C. Theories in Cultural History. (4) (Same as Sociology M292C.) Lecture, three hours. Introduc- tion to social, linguistic, semiotic, or other new interpre- tive theories and practices developed in other fields and applied to historical material. Letter grading.

207. Seminar: Ancient Mesopotamia. (Topics. (Same as Ancient Near East M250.) Seminar, three hours. Selected topics on political, social, and intellectual his- tory of ancient Mesopotamia. May be repeated for credit.

CM209. Israeli Legal History. (1 to 5) (Same as Law M336.) Lecture. Three hours. Israeli is settler society in- spired by utopian ideology but based on war and vio- lence. Like U.S., Israel is imperfect democracy commit- ted to notions of equity yet divided along class, gen- der, and ethnic lines. Law plays role in shaping identity, framing political discourse, and mediating social con- flicts. How do law and society interact in Israel and how can we understand the experience of ordinary citizens from both jurisdictions? Introduction to Israeli history and le- gal history, with focus on three periods: late Ottoman,
British mandate, and first two decades after Israeli in- dependence. Topics include legal reforms in late Otto- man period, reactions to English law after British con- quest, law and national identity, postindependence leg- al change and continuity, formalism and rights discourse, ethnic conflict and land law, influence of po- litical ideologies on commercial law, gender, religion, and law, role of courts in shaping historical memory (Holocaust). Concurrently scheduled with course C109C. 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) Semi- nar, three hours. Uses and techniques of Armenian oral history; preinterview, interview, and postinterview procedures; methods of compilation and evaluation. Field assignments, interviews, and summaries and/or paper based on interviews. S/U or letter grading.

214. Topics in Asian Literature. (4-4) Discussion, three hours. Graduate seminar utilizing world-historical perspective to examine variety of broad themes in human history. Topics vary annually. Letter grading.

215A-215B. Seminars: Ancient History. (4) Semi- nar, three hours. Course 215A is requisite to 215B. In Progress (215A) and letter (215B) grading.

216A-216B. Seminars: Byzantine History. (4) Semi- nar, 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 knowl- edge of German or French. Introduction to types of medieval source materials and the handbooks needed to use them. M218. Paleography of Latin and Vernacular Manu- scripts, 900 to 1500. (4) (Same as Classics M218, English M215, and French M210.) 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 society that produced it. Focus on relationship between Latin manuscripts and vernacular manuscripts with appropriate respect to their representa- tion of written texts. S/U or letter grading.

221A-221B. Seminars: Medieval History. (4-4) Seminar, three hours. Course 221A is requisite to 221B. In Progress (221A) and letter (221B) grading.

225. Colloquium for Graduate Students in Modern European History. (4) Seminar, three hours. Normally limited to and required of all modern European- an history graduate students. Introduction to topics, methods, and historiography of modern European his- tory.

226A-226B. Seminars: Italian Renaissance. (4-4) Seminar, three hours. Course 226A is requisite to 226B. In Progress (226A) and letter (226B) grading.

227A-227B. Seminar in World History. (4-4) Seminar, three hours. Course 227A is requisite to 227B. In Progress (227A) and letter (227B) grading.

229A-229B. Seminars: Early Modern European History. (4-4) Seminar, three hours. Course 229A is requisite to 229B. In Progress (229A) and letter (229B) grading.

M230A-M230B. Seminars: Modern European Histo- ry. (4-4) (Same as Art History M241A-M241B, Sem- inar, three hours. Course M230A is requisite to M230B. May be repeated for credit with consent of adviser. In Progress (M230A) and letter (M230B) grading.

231A-231B. Seminars: Modern European Intellec- tual and Cultural History. (4-4) Seminar, three hours. Course 231A is requisite to 231B. In Progress (231A) and letter (231B) grading.
American studies. Library research techniques provide experience and competency required for future bibliographic and research sophistication as basis for enhanced research results.

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.

268A-268B. Seminars: Recent Latin American History. (4) Seminar, three hours. Course 268A is requisite to 268B. 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-275C. Colloquia: African History. (4-4-4) Seminar, three hours. Designed for all entering and continuing graduate students in African history. Source identification, methodology, historiographical and critical 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.

280. China Studies: Discipline, Methods, Debates. (2) (Same as Chinese M202.) Seminar, two hours. Introduction to study of China as practiced in humanities and social science disciplines. S/U 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.

286. Japan in Age of Empire, (4) (Same as Anthropology M276 and Asian M292.) 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's colonies and occupied areas in this hardly explored area of study of colonialism. S/U or letter 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 the 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. 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, To/min, Lakatos, Holton, Buchdahl, Feyerabend, and others.

M296. History of Statistics. (4) (Same as Statistics M296.) Seminar, three hours. History of statistics ranging over vast and diverse territory. Development of mathematical methods; philosophical, political, and social issues that were linked to their emergence and use. S/U or letter grading.

297A-297B. Seminars: History of Science. (4-4) Seminar, three hours. Course 297A is requisite to 297B. In Progress (297A) and letter (297B) grading.

298. 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.

299. Interdisciplinary American Studies. (6) (Same as English M299.) Discussion, four hours. Research proposal, discussion, 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 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. 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. Designed for 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 M.A. degree. 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 Studies. (1 to 8) Limited to graduate students. Individual directed reading arranged with professor. M.A. candidates may take this course only once. Number of times Ph.D. candidates may take this course is subject to consent of graduate studies committee. S/U or letter grading.


Undergraduate Study

The UCLA Academic Senate approved the dismantlement of the interdepartmental program and major in History/Art History effective Spring Quarter 2009. Students already admitted to the major have until the end of Spring Quarter 2013 to complete the requirements for the B.A. degree. Students interested in combining courses in history and in art history may consider a major in one of the two academic disciplines and a minor in the other, or a double major in History and in Art History.

History/Art History B.A.

Lower division history and art history courses may be applied toward the general education requirements; a course taken to satisfy the American History and Institutions requirement may be applied toward the history section of the interdepartmental major. Each course must be taken for a letter grade.

Students wanting to confer with a counselor regarding program planning and major requirements should contact the History/Art History counselor at (310) 825-3992.

Preparation for the Major

Required: History 1A, 1B, 1C; two courses from Art History 50, 51, 54, 57; one course from Art History 55A, 55B, 56A, 56B.

Transfer Students

Transfer applicants to the History/Art History 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 history of Western civilization, two art history courses in ancient, Renaissance and baroque, medieval, or modern art, and one non-Western art history course.

Refer to the UCLA Transfer Admission Guide at http://www.admissions.ucla.edu/prospect/adm_tr.htm for up-to-date information regarding transfer selection for admission.
The Major

Required: One course from History 97A through 97O or 100; one course from 191A through 191O or 197; and courses as indicated in the following groups:


Group F: Two art history elective courses selected from the above lists. Students may also take Art History 100, C103A, C103B, C103C, 127, 197, 199 to meet this requirement

Honors Program

The honors program is designed for History/Art History majors who are interested in carrying out an independent research project that culminates in an 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 History/Art History majors who have completed a minimum of four upper division art history courses with a 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 undergraduate counselor 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 upper division courses in the major 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 major and an overall GPA of 3.65 or better, and (3) complete Art History 198A and 198B with grades of A.
14. Interaction of Science and Society. (4) Seminar, three hours. Examination of interaction of science and society, 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. Acting Myth. (4) Seminar, three hours. Interdisciplinary approach to literature and acting through study of texts and mythologies from a variety of Indo-European and Near Eastern cultures; students learn acting techniques in directed scenes from the texts. P/NP or letter grading.

16. Science of Singing Voice. (5) Seminar, three hours; discussion, one hour. Study of different historical approaches to program delivery; one-hour lab; examination of different voice-production techniques. Study of students’ own vocal productions as well as recorded samples of famous singers. 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 science and other systems of knowledge; study of history and philosophy of science; examination of the role of objective knowledge. P/NP or letter grading.

21W. Rise and Fall of Modernism. (6) Seminar, three hours; writing laboratory, two hours. Enforced requisites: English Composition 3 or 3H or English as a Second Language 36. Study of early and mid-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.

23. Political Dissonance Today and in Ancient Greece: Trial and Death of Socrates in Its Classical and Legal 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 dissent. Introduction to Greek legal system, values that animated that system, theories and strategies of dissent. Introduction to and Legal Context. (5)

27. Theories of Exchange: Social Life of Gifts and Commerce. (5) Seminar, three hours. Examination of challenge of reconciling work and family commitments for working people of both genders, with particular emphasis on recent changes in labor force participation, on ways in which gender and class lines affect time allocation, and on public policy options that might support work-family balance. Focus on use of the U.S., with look at how other advanced industrial societies — specifically Western Europe and Japan — address these issues. P/NP or letter grading.

32. Language, Performance, and Culture. (5) Seminar, three hours. Examination of the relationship between language and other mental abilities and behaviors. Examination of how these issues. P/NP or letter grading.

42. Negotiating Conflict in Diverse Cultures. (5) Seminar, three hours; fieldwork, one hour. Exploration of art and science of negotiations in addressing campus and community conflicts, with focus on positions and interests of disputants, cultural and political context of disputes, and tactics and skills to address conflicts. P/NP or letter grading.

45W. Writing about Life Sciences. (5) Seminar, three hours; discussion, one hour. Enforced requisites: English Composition 3 or 3H or English as a Second Language 36. Experiences in writing arts; study includes writings such as William Faulkner, Allen Tate, Flannery O’Connor, Thomas More’s classical text to recent ecological and feminist utopian texts, with purpose of uncovering social, intellectual, and cultural approaches underlying quest for a more perfect society. P/NP or letter grading.

50W. Writing Science. (6) Seminar, four hours. Enforced requisites: English Composition 3 or 3H or English as a Second Language 36. Study and practice of science writing in general, an activity that integrates sophisticated understanding of science with human tradition of writing arts; study includes writings by journalists and scientists on variety of topics. Satisfies Writing II requirement. 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.

53. American Folk Music, Protest, and Identity. (5) Seminar, three hours. Study of American folk music as prism to investigate more general relationships among cultural boundaries such as musical genres and social constructions of race/nation, class, generation, and gender. P/NP or letter grading.

54. Improvisation and Acting Techniques. (5) Seminar, four hours. Development of acting improvisational techniques based on knowledge in which students find themselves immersed within characters. Students prepare midterm and final scenes to be fully memorized and performed, as well as study acting techniques. P/NP or letter grading.

55. Culture and History of Utopias. (4) Seminar, four 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 approaches underlying quest for a more perfect society. P/NP or letter grading.

56. Language as Window to Mind. (5) Lecture, four hours; discussion, one hour. Study of topics in language and mind, including language acquisition in children, language representation in brain, relationship between language and other mental abilities, and autonomous nature of language as system of knowledge. P/NP or letter grading.

57. Language, Performance, and Culture. (5) Lecture, three hours. Mixture of lecture and discussion on topic of language and its relationship to performance and culture in 19th and 20th centuries. Study of theories such as Saussure, Saevy Cawell, 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.

58. Time in Society and History. (5) Seminar, four hours. Examination of concept of time from sociological, philosophical, anthropological, and physical perspectives, including study of how cultures have perceived time, how societies have organized themselves with time, how groups have clashed over time’s definition and measurement, and how academics in various disciplines have perceived time. P/NP or letter grading.

59. Writing, Language, Performance, and Culture. (5) Seminar, four hours. Writing 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 approaches underlying quest for a more perfect society. P/NP or letter grading.
62. Community and Self-Interest in History of American Culture. (6) Seminar, three hours. Examination of historical origins of frequently contradictory values that inform American thought and culture; hierarchy and equality, institutional constraints and voluntarism, collective sense of mission and belief in autonomous individual. P/NP or letter grading.

64. Neuroscience and Psychology of Art and Biology of Aesthetics. (5) Seminar, three hours. Interdisciplinary approach to study of premise that beauty, whether of faces, art works, or other subjects, is processed by innate neurophysiological processes and universal psychological phenomenon. P/NP or letter grading.

67. Structure of Physical Reality. (4) Lecture, three hours; discussion, one hour. No special mathematical knowledge required. Course in modern physics, including videos and practical demonstrations, Zen stories, and discussions of what Eastern and Western religions and philosophy in general have to say about forces of nature. Topics include quantum mechanics, microcosm of atoms, and elementary particle physics and philosophical implications. P/NP or letter grading.

69. Artificial Life and Evolutionary Design: Theory and Practice in Multidisciplinary Modeling. (5) Seminar, five hours. No special mathematical or computer knowledge required. Study of artificial life, artificial intelligences, and evolutionary computation through both literature on simulations and practical engagement in simulations themselves. 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 or 4 or Microbiology 7. 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; discussion, one hour. Examination of current 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.

71. Cross-Cultural Approaches to Media History and Culture. (5) 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. Writing Numbers. (5) Seminar, four hours. Not open to students with credit for introductory statistics. Whether it be to convince about lack of government support for arts, or global warming, or risks of living in hurricane-prone areas, statistical literacy promotes effective citizenship and social power. How to read narratives (in media, academic journals, etc.) supported by statistical data with critical eye, how to research and assess integrity of such claims and can be understood as new persuasive articles supported by statistical data. P/NP or letter grading.

80. Genomics and Boundaries of Self. (5) Seminar, three hours. Study of impact that knowledge of entire human genome sequence has on our concepts of ourselves as individuals and our place in biological universe. P/NP or letter grading.

81. Eastern Christianity in Comparative Perspec- tive: History, Doctrine, Culture. (5) Lecture, two hours; discussion, two hours. Exploration of philosophical and metaphysical beliefs of Eastern Christianity, comparing and contrasting Eastern churches to those that dominate in the West and examining how Eastern Orthodoxy continues to develop within broader Judeo- Christian tradition. P/NP or letter grading.

82. Community and Labor Development from Ground Up. (4) Lecture, three hours; discussion, one hour. Introduction to practical applications of community-oriented efforts in Los Angeles area, with projects from Community Outreach Partner- ship Center within School of Public Policy and Social Research. P/NP or letter grading.

83W. Political Science Literature. (6) Seminar, four hours; writing laboratory, two hours. Enforced requisite: English Composition 3 or SH or English as a Second Language 36. Examination of relationship among politics, rhetoric, and literature in study of litera- ture from classical times to the present, broadening into general discussions of development of political discourse in Western thought, particularly conflict between logic and rhetoric in practice of practical business of living. Satisfies Writing II requirement. Letter grading.

84. Conflicts between Languages. (5) Seminar, three hours; discussion, one hour. Examination of phonetic and sociolinguistic whys and hows of situations in three countries abroad and discus- sion of various aspects of minority languages in the U.S. P/NP or letter grading.

86. Psychology of Fear. (5) Seminar, three hours; discussion, 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.

87. Issues in American Foreign Policy: Methodology of Assessment. (4) Lecture/debate, three hours; discussion, one hour. Exploration in debate format of ways in which foreign policy issues are perceived, evaluated, and acted upon. P/NP or letter grading.

96. Cultural Knowledge, Industrial Growth, and Social Policy. (5) Lecture, three hours; laboratory, two hours. Examination, using nanotechnology, of both benefits and risks to economy and society when new technologies are in process of development. P/NP or letter grading.

97. Issues in American Foreign Policy: Methodology of Assessment. (4) Lecture/debate, three hours; discussion, one hour. Exploration in debate format of ways in which foreign policy issues are perceived, evaluated, and acted upon. P/NP or letter grading.

98. Religion of the Middle East: Conflict and Compromise. (5) Seminar, three hours; discussion, one hour. Examination of the validity of religious missionary activities in the Middle East with a focus on the Jewish, Christian, and Islamic traditions. P/NP or letter grading.

99. Nature of Knowledge and the Modern World. (5) Seminar, three hours; discussion, one hour. Examination of the relationship and history of science, technology, and society and its influence on contemporary cultural environment, specifically in Los Angeles; issues of repre- sentation as they pertain to race, ethnicity, gender, and sensuality P/NP or letter grading.

100. Psychology of Women. (4) Laboratory, two hours. Development of broader and deeper under- standing of information access and retrieval within UCLA Library by utilizing subject specialists and subject-specific collections (print and electronic) within so- cial and behavioral sciences disciplines. Course as- sists students who plan to be involved with major re- search projects or intend to undertake honors theses or comprehensive 199 projects. P/NP grading.

101. Information and Research in Social and Be- havioral Sciences. (2) Lecture, two hours. Development of broader and deeper understanding of information access and retrieval within UCLA Library by utilizing subject specialists and subject-specific collections (print and electronic) within social and behavioral sciences disciplines. Course as- sists students who plan to be involved with major re- search projects or intend to undertake honors theses or comprehensive 199 projects. P/NP grading.

101G. Graduate School Preparation. (2) Seminar, three hours; laboratory, two hours. Examination, using nanotechnology, of both benefits and risks to economy and society when new technologies are in process of development. P/NP or letter grading.

102. Culture, Media, and Los Angeles. (6) (Same as Afro-American Studies M102 and Asian American Studies M160.) Lecture, four hours; screenings, two hours. Screening for juniors and seniors. Study of the media and its influence on society and its influence on contemporary cultural environment, specifically in Los Angeles; issues of repre- sentation as they pertain to race, ethnicity, gender, and sensuality P/NP or letter grading.

103. Scientific Knowledge, Industrial Growth, and Social Policy. (5) Lecture, three hours; laboratory, two hours. Examination, using nanotechnology, of both benefits and risks to economy and society when new technologies are in process of development. P/NP or letter grading.

105. Popular Comic Book Culture: A History. (6) Seminar, three hours; discussion, one hour. Examination of the relationship and history of science, technology, and society and its influence on contemporary cultural environment, specifically in Los Angeles; issues of repre- sentation as they pertain to race, ethnicity, gender, and sensuality P/NP or letter grading.

106. Imaginary Women. (4) Seminar, three hours; discussion, one hour. Examination of the relationship and history of science, technology, and society and its influence on contemporary cultural environment, specifically in Los Angeles; issues of repre- sentation as they pertain to race, ethnicity, gender, and sensuality P/NP or letter grading.

108. Transnationalism, Diasporas, and Homeland-Hystrad Politics. (5) Seminar, three hours. Examination of debates about transnationalism, global mi- gration, and diaspora communities in the 20th and 21st centuries, with focus on the U.S., including compara- tive perspective. P/NP or letter grading.

109. Language, Meaning, and the Making of Poet- ry. (4) Seminar, three hours; workshop, one hour. In words of the augur professor, “Semiological warfare against the purveyors of semantic entropy.” In context of the development of contemporary poetry, study of history of philosophic and poetic discourse on lan- guage and its potentials, including social and political implications. P/NP or letter grading.

110. Maxist and Post-Maxist Approaches to Cultural Studies. (4) Seminar, four hours. Examination of Maxist and post-Maxist approaches to study of culture, including classical texts, theoretical and empirical works, and the Maxist 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 of stress and moderators of both social support and personality in coping strategies. P/NP or letter grading.


M114. Architecture from Los Angeles: Work of Frank Gehry, Thom Mayne, and Greg Lynn. (5) Seminar, three hours. Within last 30 years, body 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 architects — Frank Gehry, Thom Mayne, and Greg Lynn. Site visits and hands-on practice in how to read architectural plans and how to use computers and modeling in architectural study and design. 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, and UCLA’s Interdepartmental失效。Interpretation of art selections through acting, dialogues, movement, and music. Research into history and art history and production of collaborative performance piece required. P/NP or letter grading.

M117. Resistance to Evil: Organized Resistance to Nazis in Occupied Europe. (4) Seminar, three hours. Resistance is not a moral or philosophical issue, but a sociological one. What makes resistance possible are specific historical circumstances and social relations that enable ordinary men and women to oppose their oppressors. Examination of this premise through analysis of organized resistance to Nazi occupation in Europe. P/NP or letter grading.


M119. Nuclear Weapons: Critical Decisions. (4) (Same as Environment M165, Public Policy M116, and Political Science M139A.) Lecture, three hours. Examination of critical decisions regarding nuclear weapons, starting with President Roosevelt’s decision to build atomic bomb and ending with current policies on containing Iran and on avoiding nuclear catastrophe. Letter grading.

M120. Art and Performance: Interdisciplinary Approach to Collections of Getty Center. (4) (Same as Theatre on African continent, including relationship between internal war and transborder conflict, historic

121. Psychoanalysis before Freud, and a Little After. (5) Lecture, three hours; discussion, one hour. Drawing from objects in five major collections at Getty Museum, focus on five parallel historical periods in which political, social, and aesthetic philosophy of age is examined in musical and dramatic performance. Letter grading.

122. Violence Against Women in Cross-Cultural Perspective. (4) Seminar, three hours. Exploration of sources of violent acts against women in different societies. Topics include wife beating, female sexual slavery, female infanticide, dowry deaths, female genital “circumcision,” rape, and emerging global human rights responses to these issues. P/NP or letter grading.

123. War and Peace in Africa. (4) Seminar, four hours. Investigation into main causes and forms of warfare on African continent, including relationship between internal war and transborder conflict, historic

124. Midwifes, Mothers, and Medicine: Perspectives on History of Childbirth. (4) Seminar, three hours. Using examples from history and anthropology, examination of variety of practices associated with childbearing and childbirth. Addressing such themes as shifting roles among birthing women, midwives, and medical men and cultural meanings of birth. P/NP or letter grading.

125. Culture and Ethics. (4) Seminar, three hours; fieldwork, three hours. Interactive participatory study of interactions between citizenship, leadership, and service, including both theoretical work in classroom and practical work in service organizations in the field. P/NP or letter grading.

126S/L. Latinos, Linguistics, and Literacy. (5) Formerly numbered M128.) (Same as Applied Linguistics M127S/L, Chicana and Chicano Studies M170S/L, and Spanish M172S/L.) Seminar, four hours; field project, four to six hours. Recommended required: Spanish 100A. In-depth study of various topics related to literacy, including different definitions of literacy, programs for adult learners, literacy and gender, approaches to literacy (whole language, phonics, Freire’s liberation pedagogy), history of writing systems, and more. Letter grading. Required field project involving Spanish-speaking adults in adult literacy programs. P/NP or letter grading.


130. How Cold War Was Played. (4) Lecture/discussion, three hours. Examination of what prompted the Cold War, why it lasted so long, what its impact was on political and socioeconomic systems of two main protagonists, and what its legacy has become. 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 method course but one intended to convey rich knowledge that can produce in many disciplines and kinds of ethical issues raised in doing fieldwork. P/NP or letter grading.

135. Narrative in Mass Communication. (6) Seminar, four hours. Examination of narrative as primary function of mass media, beginning with social, psychological, cultural, and rhetorical functions of storytelling and basic elements of narrative, then applying these to study of film, television, and print media. P/NP or letter grading.

137. Political Satire: Offensive Art. (5) Seminar, three hours. Study of political satire in several societies and variety of genres, including review of sociopolitical conditions that act to foster or constrain satire. P/NP or letter grading.

138. Disease and Human Condition. (5) Seminar, four hours. Examination of the nature, causes, and consequences of human diseases and functional impairment and human responses to these diseases. P/NP or letter grading.

140. Dominants and Subordinates in Social Psychology of Privilege and Oppression in Public Education. (8) Lecture, four hours; discussion, one hour; seminar, three hours. Study of social amnesia and temporary inequalities in contemporary American public school, showing how such entrenched inequalities tend to become permanent. Field component included. P/NP or letter grading.


143. Latino Immigration History and Politics. (4) (Same as Chicana and Chicano Studies M124.) Lecture, four hours. Overview of immigration in 20th century, examining social, political, and economic contexts out of which different waves of Latin American immigration to U.S. has occurred. Letter grading.

144. Stigma: Anthropology of Dangerous Other. (4) Seminar, three hours. In cross-cultural perspective, analysis of apparently common causes and consequences of diverse forms of social inequality in which culturally ascribed stigma is common factor. P/NP or letter grading.


148. Simulating Society: Exploring Artificial Communities. (5) (Same as Sociology M118.) Seminar, three hours; computer simulation, one hour. Examination of social behavior through computer simulations of behavior in artificial communities. P/NP or letter grading.

150. Formal Modeling and Simulations in Social Sciences. (4) (Same as Anthropology M166 and Human Computer Complex M100.) Lecture, three hours. Exploration of different approaches to modeling empirical phenomena of concern to social sciences. Topics include utility models, learning models, decision models, group competition models, and evolutionary models. Use of multilayered computer simulations and group exercises that explore interaction among individuals interacting according to models for behavior. Discussion of advantages and drawbacks of more traditional mathematical modeling. Review of alternative forms of representations of history, among individuals and groups, and simulation studies. Required field project involving history, and issues related to verification of simulations. P/NP or letter grading.

151. American Jews and Israel in Mutual Perspective. (4) Seminar, three hours. Examination of relationship between Israel and Jews in the U.S., with emphasis on locating the two communities in Jewish historical and political context of this relationship. Offered mutually with parallel course at Tel Aviv University, including shared bulletin board and chat room. P/NP or letter grading.

152. Past Societies and Their Lessons for Our Own Future. (5) (Same as Anthropology M158Q and Geography M158Q.) Lecture, four hours. Examination of two hours. Examination of modern and past tribal and band societies (Amazonian Indians, Kalahari San, New Guineans, and others) that met varying fates, as background to examination of how modern state societies are coping or failing to cope with similar issues. P/NP or letter grading.

153. International Flash Points. (5) Seminar, three hours. Discussion of international confrontations in current international affairs, including North and South Korea, India and Pakistan, Israel and Palestinians, Iraq, Colombia, and Congo and Rwanda. P/NP or letter grading.
154. Interpreting Performance: Examination of Social, Historical, and Cultural Models for Performing Arts. (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 developed; at approximately designated performances/events required. P/NP or letter grading.

155. International Relations of Middle East. (4) (Same as Political Science M132B.) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for seniors/juniors. Role of great powers in Middle East, with emphasis on American, Soviet, and West European policies since 1945. P/NP or letter grading.


157. Mediterranean World since Roman Empire. (5) Seminar, three hours. Introduction to study of Mediterranean world over long period from fall of Roman Empire to present day, focusing on discussion of key research journals and important research articles in humanities and social sciences. Weekly research reports and presentations by McNair research students. Presentations by program faculty members and other leading researchers. May be repeated for credit. P/NP grading.

158. Critical Vision: History of Art as Social and Political Commentary. (5) Formerly numbered 29.) Same as Chemistry M117.) Lecture, four hours, activity, two hours. Exploration of structures and their geometric underpinnings, with examples and applications from architecture (space frames, domes, biology (enzyme complexes, viruses), chemistry (symmetry, molecular cages), design (tiling), engineering (space filling), and physics (crystal structures) to effect working knowledge of symmetry, two-dimensional patterns, and three-dimensional solids. P/NP or letter grading.

159. Paintings Performed: Bringing Art to Life. (5) Seminar, six hours. Interdisciplinary study in art, art history, improvisational acting techniques, and performance art. Study of paintings and sculptures from variety of genres and periods in galleries of J. Paul Getty Center Museum, integrating scholarly research, writing, creative enterprise, and music and performance enhances understanding of art in holistic way. P/NP or letter grading.

193A. Journal Club Seminars: McNair Research Scholars. (2) Seminar, two hours; discussion, one hour. Limited to McNair research students. Study of key research journals and important research articles in humanities and social sciences. Weekly research reports and presentations by McNair students. 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. Limited to McNair research students. Study of key research journals and important research articles in humanities and social sciences. Weekly research reports and presentations by McNair research students. Presentations by program faculty members and other leading researchers. P/NP grading.

193C. Journal Club Seminars: Mellon Mays Undergraduate Research Scholars. (2) Seminar, one hour; discussion, one hour. Limited to Mellon Mays undergraduate research students. Study of key research journals and important research articles in 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.

193D. Directed Honors Studies. (4) Tutorial, two hours. Preparation: minimum of 4 units completed in Humanities Collegium with grade of B or better, overall UCLA grade-point average of 3.0 or better. Special research/writing tutorial with director of one Honors Collegium course to pursue in greater depth significant topics from one colloquium course. May be repeated for credit. P/NP or letter grading.

Interdisciplinary Minor

HUMAN COMPLEX SYSTEMS

Interdisciplinary Minor

College of Letters and Science

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Dwight W. Read, Ph.D., Chair

Faculty Committee

Susanne Lohmann, Ph.D. (Political Science, Public Policy)
Human social systems are complex because humans conceptualize, communicate, and construct. Human social systems are shaped not only by factors extrinsic to the individuals making up the social systems, but also by the humans embedded within them. Humans are agents who analyze, reflect on, affect, shape, modify, and construct the social systems of which they are a part.

Students in the Human Complex Systems minor learn ways of thinking that help them make sense of and move effectively in today’s world—a world that is complex, information-rich, and prone to fast and furious change. They develop analytical skills and learn methodological tools that are relevant for the workplace in the emerging techno-economy. Students who seek to enter graduate school are well prepared by virtue of participating in some of the most exciting and novel research programs linking the frontiers of the social sciences with computer science, life sciences, humanities, management, public policy, and media arts.

Undergraduate Study

Human Complex Systems Minor

To enter the Human Complex Systems minor, students must have an overall grade-point average of 2.0 or better.

Required Lower Division Courses (12 units minimum): Three courses, including one from Mathematics 2, Statistics 10, 11, 12, 13, or 14 and two from Anthropology 7, 8, 9, 33, Economics 1, 2, Geography 3, 4, any lower division history course, Political Science 110, 120, 30, 50, Sociology 1, 10, 24 (courses may be from the same department or from different departments).

Required Upper Division Courses (20 units minimum): Five courses selected from the following: (1) two core courses from Anthropology 131, Communication Studies 154, Human Complex Systems M130 or Management M118A, Political Science 146G, Sociology 111, (2) two method courses (Human Complex Systems M100/100L and 110), and (3) one elective course in Anthropology 131 (unless taken as part of the core), M186, 186P, Communication Studies 154 (unless taken as part of the core), Geography 142, 148, Human Complex Systems 120, M130 or Management M118A (unless taken as part of the core), Political Science M115A, M142D, 146G (unless taken as part of the core), 164, Public Policy 102, C119, Sociology 111 (unless taken as part of the core), or M118; other courses may be applied by petition, and students may petition to apply Human Complex Systems 197 at the same time the contract is signed.

No more than two courses (8 to 10 units) may be applied toward both this minor and a major or minor in another department or program.

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.

Human Complex Systems

Lower Division Courses

1G. Emerging Issues in Complex Systems Science. (2) Lecture, two and one half hours. Presentation of current complexity science, particularly in human social and organizational dynamics, but also including aspects of arts, humanities, and natural sciences. Introduction to readings relevant to human complex systems and current faculty members and researchers who teach and advise in programs. P/N P or letter grading.

M10A. Introduction to Complex Systems Science. (5) (Formerly numbered 10A.) (Same as Engineering M142D.) Lecture, four hours with laboratory, three hours. Introduction to complex systems, complexity science goes beyond traditional mathematics and statistics in its use of multigenent computational models that better capture these complex, adaptive, and self-organizing phenomena. Letter grading.

Upper Division Courses

M100. Formal Modeling and Simulations in Social Sciences. (4) (Same as Anthropology M186 and Honors Collegium M150.) Lecture, three hours. Exploration of different approaches to modeling empirical phenomena of concern to social sciences. Topics include utility models, learning models, decision models, group competition, and evolutionary models. Use of multiple-output models and group exercises to explore emergent behaviors among individuals interacting according to models for behavior. Discussion of advantages and drawbacks of more classic analytical modeling. Review of alternative forms of formal representations of hypothesized processes and issues related to validation of simulations. P/NP or letter grading.

M100L. Modeling and Simulations Laboratory. (1) Laboratory, one hour. Designed for Human Complex Systems minor students. Discussion of observational techniques and engagement in live group simulations as a means to understand the structure and process of how coherent behavior and complexity emerges from interactions between individual agents, such as formation of social and political movements. First-hand experience in observing interactional patterns and system dynamics, such as how individuals come to play leadership roles, how alliances and pairing occur in groups, and how culture (lasting patterns of interaction and belief) form. Letter grading.

100L. Modeling and Simulations Laboratory. (1) Laboratory, one hour. Designed for Human Complex Systems minor students. Discussion of observational techniques and engagement in live group simulations as a means to understand the structure and process of how coherent behavior and complexity emerges from interactions between individual agents, such as formation of social and political movements. First-hand experience in observing interactional patterns and system dynamics, such as how individuals come to play leadership roles, how alliances and pairing occur in groups, and how culture (lasting patterns of interaction and belief) form. Letter grading.

110. Artificial Culture: Experiments in Synthetic Anthropology. (5) Lecture, two hours; laboratory, four hours. Prior programming experience not required. Hands-on introduction to artificial culture — the theory, design, and practice of constructing highly interactive computer simulations of human social worlds. Informed and critical look at revolutionary new sciences of complexity: multiple agencies, simultaneous causation and evolutionary emergence embodied in computational description, and understanding and explanation of human complex systems. Students design their own populations of artificial agents, create social and physical environments in which they live, and study consequences of counterfactual what-if scenarios. May be repeated for credit. Letter grading.

120. Artificial Life, Culture, and Evolution. (5) Lecture, two hours; laboratory, four hours. Prior programming experience not required. Hands-on introduction to artificial life and evolutionary computation as they contribute to philosophy and practice of artificial culture, description, understanding, and explanation of human complex systems through computer simulations. Informed and critical look at evolution, origin, and emergence of physical, biological, and cultural processes from perspective of revolutionary new sciences of complexity. Students design, modify, and experiment with interactive simulations featuring cellular automata, algorithmic patterning, and evolutionary and genetic programming. May be repeated for credit. Letter grading.

M130. Complexity Science for Social Systems. (4) (Same as Management M118A.) Lecture, four hours. Limited to juniors/seniors. Introduction to (1) complexity science as applied to social behavior and (2) agent-based computational modeling. Use of complexity science to bridge old and new conceptions of social science. Newtonian science, neoclassical economics, and old-style approaches to social science all build on assumptions that all basic agents comprising phenomena (atomic particles, molecules, organisms, people, groups, firms) are homogeneous and go forward in time under equilibrium conditions interspersed with occasional disequilibrium periods. Letter grading.

M140D. Diversity, Disagreement, and Democracy: Can’t We All Just Get Along? (4) (Same as Political Science M115D.) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Can’t we all just get along? Study of diversity, disagreement, and democracy. Diversity covers individual differences, cultural differences, and human universals; groupism, factionalism, and identity politics; multiculturalism and one-world ethics. Disagreement includes moral, ideological, and party-political disagreement; resolvable and irresolvable kinds of disagreement; groupthink and group polarization; herdng 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. Letter grading.

M145. Ethics and Governance. (4) (Same as Political Science M115A and Public Policy M122.) Lecture, three or four hours; discussion (when scheduled). Designed for juniors/seniors. Study of applied ethics and governance, taking case-based approach, mixing normative and positive perspectives. Is action X morally right or wrong? What would a right action look like? More general question: whether action X is morally right or wrong? How do governance structures influence how people reason about whether action X is morally right or wrong? How can we design governance structures that encourage people to act ethically, contribute to public goods, and lead productive and fulfilled lives? P/NP or letter grading.

M193P. Journal Club Seminars: Human Complex Systems. (1) (Same as Anthropology M193P) Seminar, one hour. Limited to undergraduate students. Discussion of current readings in discipline. May be linked with speaker series. May be repeated for credit with topic change. P/NP grading.

197. Individual Studies in Human Complex Systems. (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 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 Human Complex Systems. (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.

**HUMAN GENETICS**

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Wayne W. Grody, M.D., Ph.D.

Deborah Krakow, M.D., in Residence

Stefan Horvath, Ph.D.

James A. Lake, Ph.D.

Kenneth L. Lange, Ph.D. (Maxine and Eugene Rosenfeld Endowed Professor of Computational Genetics)

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Stanley F. Nelson, M.D., in Residence

Pavi E. Pajukanta, M.D., Ph.D.

Christina G.S. Palmer, Ph.D., in Residence

Karen Reue, Ph.D.

David L. Rimoin, M.D., Ph.D.

Jerome I. Rotter, M.D., Ph.D., in Residence

Chiara Sabatti, Ph.D.

Janet S. Sinhaheimer, Ph.D.

Eric M. Sobel, Ph.D., in Residence

Marc A. Suchard, M.D., Ph.D.

Eric J. N. Vileira, M.D., Ph.D.

Stephen G. Young, M.D.

Professor Emeritus

Stephan Cederbaum, M.D.

Associate Professors

Esteban C. Dell’Angelica, Ph.D.

Katrina M. Dipple, M.D., Ph.D.

Eleazar Eskin, Ph.D.

Assistant Professor

Julian A. Martinez, M.D., Ph.D.

Adjunct Associate Professors

Roei Ophoff, Ph.D.

Jeanette C. Papp, Ph.D.

**Scope and Objectives**

The graduate Human Genetics Program prepares students for careers as independent laboratory researchers with a firm grasp of the developments in biological and medical research. The rapidly evolving field of human genetics now incorporates genetic, biochemical, cell biological, and developmental studies of both humans and model organisms to tackle biomedical problems important for human health and disease. Areas of study include both Mendelian and non-Mendelian hereditary diseases, genomics and mapping, bioinformatics, developmental biology, neurogenetics, sex determination, cyto genetics, human malformation, and chromatin structure and function. Laboratory research is emphasized. Conceptual approaches to medically related biological problems are employed, frequently with the aid of automation and advanced imaging techniques, toward the goal of disease prevention, control, and eradication methods such as gene therapies. Coursework acquaints students with the most current literature and trains students in critical thinking, experimental design, and the ability to anticipate future developments.

Graduate study leading to a Ph.D. degree is emphasized. Under special circumstances, M.S. candidates are considered after consultation with faculty members and the chair.

**Graduate Study**

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://www.gcdn.ucla.edu/gasaalibrary/pgmrqintro.htm. 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 (M.S.) and Doctor of Philosophy (Ph.D.) degrees in Human Genetics. An M.D./Ph.D. program is also offered.

**Human Genetics**

Upper Division Courses

CM122. Mouse Molecular Genetics. (2) Same as Microbiology CM122.) Lecture, two hours; discussion, one hour; outside study, eight hours. Concurrently scheduled with course CM222. P/NP or letter grading.

CM124. Computational Genetics. (4) (Same as Computer Science CM124.) Lecture: three hours; discussion, one hour; outside study, eight hours. Concurrently scheduled with course CM224. Letter grading.

CM144. Genomic Technology. (4) Lecture: three hours; discussion, one hour. Requisite: Life Sciences 4. Survey of key technologies that have led to successful application of genomics to biology, with focus on theory behind software and experimental and their current applications. Concurrently scheduled with course C244. P/NP or letter grading.

CM156. Human Genetics. (4) (Same as Microbiology CM156 and Molecular, Cell, and Developmental Biology CM156.) Lecture: three hours; discussion, two hours. Requisites: Life Sciences 3, 4. Application of genetic principles in human populations, with emphasis on cytogenetics, biochemical genetics, population genetics, and family studies. Lectures and readings in the literature, with focus on current questions in the fields of medical and human genetics and methodologies appropriate to answer such questions. Concurrently scheduled with course CM256. 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 Biostatistics 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. S/U or letter grading.

M207A. Theoretical Genetic Modeling. (4) Same as Biostatistics M207A and Biostatistics M227.) Lecture, three hours; discussion, one hour. Requisites: Mathematics 115A, 131A, Statistics 100B. Mathematical models in statistical genetics. Topics include population genetics, genetic epidemiology, gene mapping, design of genetic experiments, DNA sequencing analysis, and molecular phylogeny. S/U or letter grading.

M207B. Applied Genetic Modeling. (4) Same as Biostatistics M207B and Biostatistics M237.) Lecture, three hours; laboratory, one hour. Requisites: Biostatistics 110A, 110B. 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 genomic technologies, functional genomics, proteomics, statistical genetics, bioinformatics, and ethical issues in human genetics. S/U grading.

M211. Mathematical and Statistical Phylogenetics. (4) (Same as Biostatistics M211 and Biostatistics M223.) Lecture, three hours; discussion, one hour. Requisites: Biostatistics 110A, 110B, Mathematics 170A. 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.

CM222. Mouse Molecular Genetics. (2) (Same as Microbiology CM222.) Lecture, two hours. Requisite: Life Sciences 4. Emphasis on use of mouse genetic approach to studying fundamental biological questions. Topics include mouse genome and functional genomics, mutagenesis screening and cloning of disease genes, transgenesis and its application in developmental biology, stem cell biology, and modeling human genetic disorders. Reading materials include original papers and reviews. Concurrently scheduled with course CM224. P/NP or letter grading.

CM224. Computational Genetics. (4) (Same as Computer Science CM224.) Lecture, three hours; discussion, one hour; outside study, eight hours. Preparation: one statistics course and familiarity with any programming language. Designed for undergraduate and graduate engineering students, as well as students from biological sciences and medical school. Introduction to current quantitative understanding of human genetics and computational interdisciplinary research in genetics. Topics include introduction to genetics, hu-

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man population history, linkage analysis, association analysis, association study design, isolated and admixed populations, human structural variation, model organisms, and genotyping technologies. Computational techniques include those from statistics and computer science. Concurrently scheduled with course CM124. Letter grading.

M229S. Seminar: Current Topics in Bioinformatics. (4) (Same as Computer Science M229S.) Seminar, four hours; outside study, eight hours. Designed for graduate engineeringstudents, as well as students from other schools, departments, and programs. Introduc- tion to current topics in bioinformatics, genomics, and computational genetics 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 history, linkage analysis, and association technologies. Computational techniques include those from statistics and computer science. May be repeated for credit with topic change. Letter grading.

236A. 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 genet- ics, including variability in inherited traits, and the role of population genetics and relevant techn- ologies. Topics include genomic technologies, human genome, mapping and identification of disease-causing mutations, transcriptomics, proteomics, functional genomics, and stem cells. Reading mate- rials include original research articles and reviews or book chapters. Letter grading.

236B. Advanced Human Genetics. (4) Lecture, four hours. Recommended preparation: introductory statis- tics knowledge equivalent to Biostatistics 110A, Statis- tics 100A, or 110A and general genetics knowledge equivalent to Ecology and Evolutionary Biology 121 or Molecular, Cell, and Developmental Biology 144. Advanced topics in human genetics related to complex genetic traits and common diseases, with emphasis on bioinformatics and mathematical modeling. Reading mate- rials include original research papers and reviews. S/U or letter grading.

C244. Genomic Technology. (4) Lecture, three hours; discussion, one hour. Required preparation: introductory sta- tistics knowledge equivalent to Biostatistics 110A, Statistics 100A, or 110A and general genetics knowledge equivalent to Ecology and Evolutionary Biology 121 or Molecular, Cell, and Developmental Biology 144. Advanced topics in human genetics related to complex genetic traits and common diseases, with emphasis on bioinformatics and mathematical modeling. Reading mate- rials include original research papers and reviews. S/U or letter grading.

M252. Seminar: Advanced Methods in Computa- tional Biology. (2) (Same as Bioinformatics M252 and Chemistry M252.) Seminar, one hour; discussion, one hour. Designed for advanced graduate students. Ex- amination of computational methodology in bioin- formatics and computational biology through presentation of current research literature. How to select and apply methods, from computational and mathematical ma- chines to problems in bioinformatics and computational biology; development of novel methodologies. S/U or letter grading.

M255. Mapping and Mining Human Genome. (3) (Same as Pathology M255.) Lecture, three hours. Ba- sic 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 localizations of dis- ease genes. S/U or letter grading.

CM256. Human Genetics. (4) (Same as Microbiol- ogy CM256 and Molecular, Cell, and Developmental Bi- ology CM256.) Lecture, three hours; discussion, two hours. Required: Life Sciences 3, 4. Application of genetic principles in human populations, with empha- sis on human chromosome analysis, population genetics, and family studies. 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.

M260A. Introduction to Bioinformatics. (4) (Same as Bioinformatics M260A, Chemistry CM260A, and Computer Science CM221.) Lecture, three hours; dis- cussion, one hour. Enforced requisites: Biostatistics 100A or 110A or Mathematics 170A or Statistics 100A or 110A, and Computer Science 180 or Program in Computing 50 with grade of C– or better. Introduction to bioinformatics and methodologies, with emphasis on concepts and inventing new bioinformatic methods. Focus on sequence analysis and alignment algo- rithms. S/U or letter grading.

M278. Statistical Analysis of DNA Microarray Data. (4) (Same as Biostatistics M278.) Lecture, three hours. Requisite: Biostatistics 200C. Instruction in use of sta- tistical tools used to analyze microarray data. Structure coverage to analytical protocol and responsible might follow when working with microarray data. S/U or letter grading.

282. Human Genetics Seminar and Journal Club. (2) Seminar, one hour; discussion, one hour. Limited to graduate students. Participation and presentation in weekly journal club meeting whose topics reflect those of talk in Human Genetics Seminar Series during fol- lowing week. Journal club presentation required. S/U or letter 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 M.S. Comprehensive Exami- nation or Ph.D. Qualifying Examinations. (2 to 12) Tutorial, to be arranged. Individual study for M.S. com- prehensive examination or Ph.D. qualifying examina- tions. May be repeated for credit. S/U grading.


INDO-EUROPEAN STUDIES

Interdepartmental Program College of Letters and Science UCLA

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H. Craig Melchert, Ph.D., Chair
Faculty Committee
Vyacheslav V. Ivanov, Ph.D. (Slavic Languages and Literatures)
Stephanie W. Jamison, Ph.D. (Asian Languages and Cultures)
Joseph F. Nagy, Ph.D. (English)
Christopher M. Stevens, Ph.D. (Germanic Languages)
Brent H. Vine, Ph.D. (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 Ph.D. 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, http://www.gdnet.ucla.edu/gasa/library/pgmrqintro.htm. In many cases, more detailed guidelines may be outlined in an- nouncements, other publications, and websites of the schools, departments, and programs.

Graduate Degree

The Indo-European Studies Program offers Candidate in Philosophy (C.Phil.) and Doctor of Philosophy (Ph.D.) 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, South Asian 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 early 4th millennium B.C. While literate civilizations of Egypt, Indus Valley, China, and Mesoamerica left little evidence of corresponding earli- est developments, their antiquity and, in case of China and Mesoamerica, their evident isolation 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 semiotic language representa- tion. 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 mod- ern writing systems. P/NP or letter grading.

M70. Origin of Language. (5) (Same as Communica- tion Studies M70 and German M70.) Lecture, three hours; discussion, one hour. Theoretical and method- ological issues surrounding origin of language. Topics include evolutionary theory, evolution of man, how lan- guage is organized in brain, and science of language, including physiology of speech, phonetics, and com- parative reconstruction. Letter grading.

Upper Division Courses

131. European Archaeology, Neolithic to Bronze Age. (4) Lecture, four hours. Survey of European cul- tures from beginning of food-producing economy in 7th millennium B.C. to beginning of Bronze Age in 3rd mil- lennium B.C. P/NP or letter grading.

132. European Archaeology: Bronze Age. (4) Requi- site: 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.

M150. Introduction to Indo-European Linguistics. (5) (Same as Linguistics M150.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requi- site: Linguistics 1 or 20. Indo-European languages (ancient and modern), including their relationships, chief characteristics, writing systems, and sociolinguis- tic 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: famil- iarily with at least one ancient Indo-European lan- guage. Comparison of major Indo-European mytholo- gies and poetic traditions and reconstruction of their common sources. Topics include deities and their names; symbolic systems in social context; myths, folk
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 transliteration. P/NP or letter grading.

199. Special Studies. (2 to 8) Tutorial, to be arranged. P/NP or letter grading.

Graduate Courses


M230A-M230B. Old Iranian. (4-4) (Same as Iranian M230A-M230B.) Lecture, four hours. Studies in grammar and texts of Old Persian and Avestan. Comparative considerations. Only course M230B may be repeated for credit. In Progress (250A) and S/U or letter (250B) 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.

C250. 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 divinities and their names; symbolic systems in social context; myths, folk narratives, belief systems; relations with other traditions; literary continuations of mythopoeic material. Concurrently scheduled with course C160. S/U or letter grading.


INFORMATION STUDIES

Graduate School of Education and Information Studies

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Gregory H. Leazer, D.L.S., Chair

Professors
Christine L. Borgman, Ph.D. (Presidential Professor of Information Studies)
Johanna R. Drucker, Ph.D. (Martin and Bernard Breslauer Professor of Bibliography)
Anne J. Gilliland-Swetland, Ph.D.
Leah A. Lievrouw, Ph.D.
Beverly P. Lynch, Ph.D.
Mary Niles Maack, D.L.S.
John V. Richardson, Ph.D.

Professors Emeriti
Marcia J. Bates, Ph.D.
Howard A. Besser, Ph.D.
Harold Barko, Ph.D.
Robert M. Hayes, Ph.D.
Russell Shank, D.L.S.
Elaine Svenonius, Ph.D.
Diana M. Thomas, Ph.D.
Virginia A. Walter, Ph.D.

Associate Professors
Clara Chu, Ph.D.
Jonathan Furner, Ph.D.
Christopher M. Kelty, Ph.D.
Gregory H. Leazer, D.L.S.
Ellen J. Pearlstein, M.A.

Assistant Professors
Jean-François Blanchette, Ph.D.
Steven Ricci, M.A., Ph.D.
Ramesh Srivinvasan, Ph.D.

Lecturers
Murtha Baca, Ph.D.
Stuart Biegel, J.D.
Keri S. Botello, M.A., M.S.
Lynn Boyden, M.L.S.
David Cappoli, M.L.S.
Andra M. Darlington, M.L.I.S.
Loretta M. Gaffney, M.S.
Esther S. Grassian, M.L.S.
Joan Kaplowitz, Ph.D.
Julie Kwan, M.S.
Victoria McCargar, M.L.I.S.
Stacey Meeker, M.L.I.S.
Cynthia L. Mediavilla, Ph.D.
Luz H. Mendes, M.L.I.S.
Mary E. Menzel, M.L.I.S.
Eva Mitnick, M.L.S.
Alma Ortega, M.L.I.S., M.A.
Ward Smith, M.L.I.S.

Visiting Assistant Professor
Susan M. Allen, Ph.D.

Scope and Objectives

The Department of Information Studies has one of the top-ranked programs of its kind in the country and has developed an international reputation in the areas of information policy, information-seeking behavior, user interface development, archives, preservation, and cataloging. Whether students choose to pursue a master's degree or a Ph.D., they graduate with a broad understanding of both theory and practice.

Students with master's degrees go on to careers as librarians, archivists, and information professionals in a variety of organizational settings. The Ph.D. focuses on the preparation of scholars in the field.

For information about the department and programs, see http://is.gseis.ucla.edu.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://www.gdnet.ucla.edu/gasaa/library/pgmrqintro.htm. 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 Information Studies offers the Master of Library and Information Science (M.L.I.S.) degree and the Doctor of Philosophy (Ph.D.) degree in Information Studies.

One concurrent degree program (Library and Information Science M.L.I.S./Management M.B.A.) and one articulated degree program (Library and Information Science M.L.I.S./Latin American Studies M.A.) are also offered.

Information Studies

Lower Division Courses


20. Introduction to Information Studies. (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, Lycos), retrieval systems, electronic publishing, and distribution of media, including newspapers, books, and music. Exploration of many of these technological, social, cultural, and political aspects in which they exist, and how social relationships are changing. 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, Lycos), retrieval systems, electronic publishing, and distribution of media, including newspapers, books, and music. Exploration of many of these technological, social, cultural, and political aspects in which they exist, and how social relationships are changing. 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. 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. Culminating paper or project required. 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 is created, interpreted, 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 discuss, learn, and understand ethical challenges of multicultural information society that shape societal, professional community, and individual views and impact professional practice, decision making, and public policy. S/U grading.


208. Scholarly Communication and Bibliometrics. (4) Lecture, four hours. Preparation: one inferential statistics course. Survey of current theory, method, and empirical studies at intersection of scholarly communication and bibliometrics, seeking to understand flow of ideas through published record, whether in print, electronic form, or other media. Letter grading.


210. Design of Library and Information Services. (4) Lecture, two hours; discussion, two hours. Principles and methods for planning and designing user-driven library and information services. Principles and methods for assessing information needs of designated populations and for designing services that meet those needs. Letter grading.

M225. Latin American Research Resources. (4) Same as History M265 and Latin American Studies M260.) Discussion, three hours. General and specialized materials in fields concerned with Latin American studies. Library resources provide experience and competency required for future bibliographic research and research methodology as basis for advanced research results. S/U or letter grading.

227. Information in Culturally Diverse Communities. (4) Lecture, four hours. Issues in provision of information services in multilingual and multicultural society. Understanding role of information institutions in promoting cultural diversity and preserving ethnic heritage. Letter grading.

228. Measurement and Evaluation of Information Systems and Services. (4) Lecture, two hours; discussion, two hours. Preparation: one research methods course. Recommended: one library automation course. Information systems and services from points of view of their cost and effectiveness in meeting desired objectives. Review of principles of costing. Study of information literacy in information systems and services. S/U or letter grading.

M229B. Africana Bibliography and Research Methods. (4) Same as African Studies M229B.) Discussion, four hours. Problems and techniques of research methodologies related to Africana studies. Emphasis on relevant basic and specialized reference materials, using full range of available information resources, including library systems, computerized databases, and computerized databases. S/U or letter grading.

M229C. Introduction to Slavic Bibliography. (2) (Same as Slavic M229C.) Lecture, two hours. Introduction to digital library culture. Four-hour section for humanities and social sciences. Emphasis to be determined by requirements and background of enrollees. Topics include relevant library terminology and concepts; survey of languages and transliteration systems; acquisition of Slavic and Eastern European library materials; Slavic and Eastern European scholarship in the West; relevant reference sources, archival resources, and research methods; survey of online databases; compilation of bibliographies. S/U grading.

233. Records and Information Resources Management. (4) Lecture, three hours. Introduction to records management in corporate, government, and other organizational settings; including analysis of organizational information flow, classification and filing systems, records retention scheduling, records inventory, confidentiality, and ethics; and image management technology, and litigation support. Letter grading.


236. Historical Bibliography. (4) Lecture, four hours. Requisites: courses 200, 435. History of library formats (books, broadsides, magazines, newspapers, song sheets, etc.), relation to material characteristics of production, distribution, and readership in their social, political, and economic context. Emphasis varies but is usually on developments prior to 1800. Attention to historical, and research methods. Library Historical aforementioned eras of the American, and Histoire du livre approaches. Letter grading.


M238. Environmental Protection of Collections. (4) (Same as Conservation M240.) Lecture, two hours; laboratory, two hours. Requisite: course 432. Review of environmental and biological agents of deterioration, including light, temperature, relative humidity, pollution, insects, and fungi. Emphasis on monitoring to identify agents and understanding sensitivities, along with protective measures for collections. Letter grading.

239. Letterpress Laboratory. (1) Laboratory, two hours. Hands-on printing experience in letterpress shop designed to gain shop experience in book design, letterpress printing, digital libraries, scholarly communication, and other restraints on access to information. Letter grading.

240. Management of Digital Records. (4) Lecture, four hours. Preparation: one research methods course. Emphasis on long-term management of digital administrative, information, communications, imaging, or research systems and records. Topics include electronic recordkeeping, enterprise and risk management, systems analysis and design, metadata development, data preservation, and technological standards and policy development. Letter grading.

245. Information Access. (4) Lecture, two hours; discussion, two hours. Emphasis on networked ontologies, with focus on problem solving. Provisions fundamental knowledge and skills enabling information professionals to link users with information. Emphasis on social structure of selected 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. Emphasis on information-seeking behavior and influences, both individual and social, associated with human beings needing, using, and acting on information. Topics include information theory, human information processing, information flow among social and occupational groups, and research on information needs and uses. Letter grading.


251. Seminar: Specialized Literatures. (4) Seminar, four hours. Requisite: course 245. Exposure to major literatures across spectrum of disciplines in three broad areas: (1) arts and humanities, (2) social sciences, (3) natural sciences. Students become familiar with knowledge structures; emphasis on reference and information sources for scholarly research. Letter grading.

M253. Medical Knowledge Representation. (4) (Same as Biomedical Engineering M226.) Seminar, four hours; outside study, eight hours. Designed for graduate students. Issues related to medical knowledge representation and its application in healthcare processes. Topics include data structures used for representing knowledge (conceptual graphs, frame-based models), different data models for representing spatio-temporal information, rule-based implementations, current statistical methods for discovery of 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 clinical vocabularies (SNOMED, CPT) Letter grading.

M254. Medical Information Infrastructures and Internet Technologies. (4) (Same as Biomedical Engineering M227.) Lecture, four hours; outside study, eight hours. Designed for graduate students. Introduction to networking, communication, and information infrastructures in medical environment. Exposure to basic concepts related to networking at several levels: low-level (TCP/IP, services), medium-level (network topology), and high-level issues (Intranets, Web-based services) implementations. Commonly used medical communication protocols (HL7, DICOM) and current medical information systems (HIS, RIS, PACS). Advents in networking (such as wireless) and health sys-

277. Information Retrieval Systems: User-Centered Designs. (4) Lecture, two hours; discussion, two hours. Emphasis on design implications of interactions between users and features of automated information systems and interfaces that are specific to information-seeking process. Emphasis on search strategies, user-computer interaction, and use of thesauri and other vocabularies. Letter grading.

279. Seminar: Information Systems. (4) Seminar, four hours. Preparation: at least one course from 246, 272, 274, 276, 277, 280, 283. Content varies from term to term to allow emphasis on specialized topics such as vocabulary control, file design, indexing, classification, text processing, measurement 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 nature, uses, and practices of research appropriate to information studies. Identification of research problems and design and evaluation of research methods. Emphasis on inquiry methodology and empirical research. S/U or letter grading.


285. Introduction to Research Design and Methodology. (4) Seminar, four hours. Designed for Ph.D. students. Introduction to research traditions in library and information science: quantitative/qualitative social science methods, ethnographic/field approaches, and historical methods. Discussion of philosophical foundations of research, formulating research questions, and designing appropriate research studies. Letter 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 the role of technology in information literacy, electronic networks, youth at risk, information literacy research problems and design and evaluation of research. Letter grading.

290. Research Seminar: Information Studies. (1 to 2) Seminar, one to two hours. 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 social aspects of information and information-related artifacts, agents, contexts, institutions, practices, processes, values, and relationships. In-depth analysis of several analytical frameworks that can be used to analyze social, cultural, and political roles of information institutions and professionals who direct them. Letter grading.

298A. Doctoral Seminar: Research Methods and Design. (4) Formerly numbered 291B.) Seminar, four hours. Survey of quantitative, qualitative, and historical research designs. Ethical issues, conceptualization of research goals, literature review, 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 methodology, information visualization, network analysis — bibliometrics, informetrics, scientometrics, social network analysis. Letter grading.

M299. Research Resources for European Studies. (2) (Same as French M299, German M299, Italian M299, Slavic M299, and Spanish M299.) Lecture, two hours. Essentials of library research strategy and effective searching in key print and online resources for European and Russian studies. Through combination


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 distinctive 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 Access and Systems. (4) Seminar, four hours. Requisite: course 431. Exploration 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 issues in development of online archival access systems. Letter grading.

448. Information Literacy Instruction: Theory and Practice. (4) Lecture, four hours. Identification of problem in user education/bibliographic instruction theories and methodologies, and trends in information formats. Examination of variety of user education/bibliographic instruction theories and methodologies, and materials of user education. S/U or letter grading.

457. Health Sciences Librarianship. (4) Lecture, four hours. Health sciences information resources and services, management of health sciences information resources and services, health sciences environment and policies, information systems and technology. 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, and user interfaces 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). Developments in standards for information processing and new information technologies. Letter grading.

497. Fieldwork in Libraries or Information Organizations. (4 or 8) Fieldwork, 12 or 24 hours depending on nature and complexity of project. Fieldwork experience may include research, library, archival, or other information setting. Fieldwork experiences may include opportunities in state, national, and international institutions. S/U grading.

498. Internship. (4) Discussion, to be arranged. Supervised professional training in a library or information center approved by internship coordinator. Minimum 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, department chair, and graduate dean. Used to record enrollment of UCLA students in 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 of study or complexity of research. S/U grading.


INSTITUTE OF THE ENVIRONMENT AND SUSTAINABILITY
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Professors
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The IloES 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 concentration 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 defined as the simultaneous consideration of human population, the environment, 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 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 IloES 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 and Space Sciences 1 (required for the Earth and environmental science minor) or Environment M10, Life Sciences 1, 2, Mathematics 3A and 3B or 31A, and 31B, Physics 6A and 6B (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 Mathematics 3C (or 32A) and Physics 1C (or 6C) are also required.

For the conservation biology minor, Chemistry and Biochemistry 14C (or 30A), Life Sciences 1, and 3 are also required.

For the Earth and environmental science minor, Chemistry and Biochemistry 14C (or 30A) or Physics 1C (or 6C), Earth 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) and Life Sciences 3 are also required.

For the environmental systems and society minor, two courses from Chemistry and Biochemistry 14C or 30A, Life Sciences 3, Mathematics 3C or 32A, and Physics 1C or 6C are also required.

For the geography/environmental studies minor, two courses from Chemistry and Biochemistry 14C or 30A, Life Sciences 3, Mathematics 3C or 32A, and Physics 1C or 6C, 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 at http://www.admissions.ucla.edu/prospect/adm_tr.htm 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. An atmospheric and water science course from Atmospheric and Oceanic Sciences 101, 103, M105, 130, Earth and Space Sciences C132, 153, or Geography 105;
2. A climate science course from Atmospheric and Oceanic Sciences 102, Geography 102, 104, M106, or M131;
3. A course in Earth and Space Sciences 101, C113, 119, 135, 139, 150, Environmental M127, Geography 100, 101, or M107;
4. An ecology and conservation biology course from Ecology and Evolutionary Biology 100, 109, 116, 151A, 154, Environmental M121, Geography 111, or 113;
5. An environmental management course from Environment M134, M155, 160, 166, or Public Policy C115;
6. A 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, M153, Geography M128, 135, M137, 145, 150, M153, 156, or Philosophy 125; (2) One policy and politics course from Environment 138, M155, M161, M162, M164, or 166.

Practicum/Colloquium Requirements

Required: Four terms of Environment 170 and three capstone practicum courses (180A, 180B, 180C).

Minor and Concentration Requirements

No more than two of the courses below may be applied toward both these minors and concentrations and a major or minor in another department or program. Successful completion of a minor is indicated on the transcript and diploma.

For the atmospheric and oceanic sciences minor, at least two courses from Atmospheric and Oceanic Sciences 101, 102, 103, 104 and up to five courses from Atmospheric and Oceanic Sciences C110, C115, 130, 145, C160, C170, Chemistry and Biochemistry 110A are required. One course may be taken on a Passed/Not Passed basis.

For the conservation biology minor, Ecology and Evolutionary Biology 100, 116 (or Environment 121), and four to six courses from 101, 103, 105, 109, 111, 112, 114A, 122, 129, 151A, 154, 176, 180A are required.

For the Earth and environmental science minor, five courses from Earth and Space Sciences 101, 112, C113, 139, 150, 153 are required.

For the environmental engineering minor, Civil and Environmental Engineering 153 and five courses from 151, 154, 155, 156A, M166, Chemical Engineering C118, Environmental Health Sciences C125, C164 are required.

For the environmental health concentration, Environmental Health Sciences 100, C135, Epidemiology 100, and three courses from Chemistry and Biochemistry 153A, Environmental Health Sciences C125, C140, C152D, C157, C164, 203 are required.

For the environmental systems and society minor, seven courses from Environment M109, M111, 121, 122, M130, M132, M133, M134, M135, M137, 138, M153, M155, 160, M161, M164, 166 are required.

For the geography/environmental studies minor, three courses from Geography M106, M107, M109, 110, 113, M115, 116, 120, 121, 122, 123, 124, 125, 126, M127, M128, M129, M131, 132, 135, 136, 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, 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. Consult 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): At least two courses from Astronomy 3, Atmospheric and Oceanic Sciences 1, 2, 3, Earth and Space Sciences 1, 15, 16, 20, Ecology and Evolutionary Biology 10, 13, 25, Environment M1A, M1B, M10, 14, Geography 1, 2, 5.

Required Upper Division Courses (20 units): At least five courses from Environment M109, M111, 121, 122, M130, M132, M133, M134, M135, M137, 138, M153, M155, 160, M161, M164, 166.

No more than 8 units may be applied toward both this minor and any other major or minor program, and at least 16 units applied toward the minor must be taken in residence at UCLA. Transfer or substitution of credit for any of the above is subject to institute approval; consult an academic adviser at the institute 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.

Environment

Lower Division Courses

M1A-M1B-M1CW. Global Environment. (6-6-6)
(Same as GE Clusters M1A-M1B-M1CW) Course M1A is enforced requisite to M1B, which is enforced requisite to M1CW. Limited to first-year freshmen. Letter grading. M1A-M1B. Multidisciplinary Perspective I, II, Lecture, three hours; discussion, two hours. Human effects on Earth’s ecosystem and social and technological solutions to environmental pollution and overpopulation. History and ecology in lectures; laboratory exercises included in discussions. M1A and M1B, Special Topics. Seminar, three hours. Enforced requisite: course M1B. Examination of specialized environmental topics such as air and water, global warming, and feeding Earth’s population. Satisfies Writing II requirement.

M10. Introduction to Environmental Science. (4)
(Same as Atmospheric and Oceanic Sciences M10) 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.

12. Sustainability and Environment. (4) Lecture, three hours; discussion, one hour. Introduction to sustainability with emphasis on environmental component, including Earth’s physical, chemical, and biological processes as related to resource demands and management. Examination of application of scientific methods 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, biodiversity, pollution, and water and energy resources presented in context of creating sustainable human society that is environmentally sound, economically viable, and socially just and equitable. 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 juniors/seniors. Examination of history, mechanisms, and consequences of interactions between humans and environment. Exploration in depth of the major environmental problems described in M105, including deforestation, desertification, and greenhouse gas increase and ozone depletion) and four major subjects (soil, biodiversity, water, and landforms). P/NP or letter grading.


M113. Los Angeles Watershed. (4) Lecture, three hours; discussion, one hour. Overview of how varying scales of influence from atmosphere/climate, basin hydrology, major urban development, wetland growth, and wetlands loss, coastal water circulation, and coastal biogeochemistry affect water resources in Los Angeles. Letter grading.

M114. Soil and Water Conservation. (4) (Same as Geography M110.) Lecture, three hours; discussion, one hour. Designed for juniors/seniors. Systematic study of processes of and hazards posed by erosion, sedimentation, and related techniques needed to conserve soil and maintain environmental quality. Scope includes agriculture, forest engineering, mining, and other rural uses of land. P/NP or letter grading.

121. Conservation of Biodiversity. (4) Lecture, three hours; discussion, one hour. Open to students with credit for Ecology and Evolutionary Biology 116. Examination of interrelation of natural biotic and human systems. Description of distribution of biodiversity and the issues and challenges that maintain it. Course analysis of various levels of threats and multidimensional challenges required for mitigating threats. Letter grading.

122. International Integrated Coastal Management. (4) Lecture, three hours. Course is one of most complex and interesting environments because of interactions among several ecosystems. Coast is often densely populated, and population growth, therefore socioeconomic conflicts are common. Sewage and industrial pollution, overfishing, and poorly planned development often threaten health of environment. Integrated coastal management (ICM) offers framework for resolving conflicts in manner that allows sustainable development. Focus on how ICM is being used in U.S. and around world to solve pressing ecological and socioeconomic problems. Letter grading.

123. Coastal Ecology in Southern Thailand. (5) Lecture, three hours; fieldwork, five hours. Interrela-
tion between coastal and marine organisms and environment, including physical, chemical, biologi-
cal, and geological environment; population ecology of marine organisms; application of ecological the-
ories to marine resource management; human im-
pacts on marine environments; global environmental change; marine and coastal zone management and conservation. Emphasis on tropical coastal habitats and ecology of Thailand and Southeast Asia. Offered in summer only. 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, two hours. Soils and environmental impli-
cations: 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 Change. (4) (Same as Geog-
raphy M131.) Lecture, three hours; reading period, one hour. Examination of natural factors producing environmental changes over past two million years. How present landscape reflects past conditions. Effects of environmental change on people. Consideration of stability and change, and degree to which environmental modification. Focus on impact of natural and anthropogenic changes on forests. P/NP or letter grading.

M131SL. Gender and Sustainability: Local-Global Connections. (5) (Formerly numbered M131SL) Lecture, three hours; service learning, two hours. Introdu-
tion to gender and development (GAD) theories, anal-
ytical approaches, and applied case studies in context of local-global sustainability and environmental issues, with focus on knowledge, roles, relationships, needs, practices, and strategies of women vis-a-vis men. In-
vestigation of gender and sustainability dimensions of food system, including agribusiness, community-sup-
pported agriculture, farmers’ markets and cooperatives, fair trade and certification, genetically engineered foods, food supply, food safety, and nutrition, and related student-advocated issues. Integration of variety of student-centered learning modes. Volunteering with community/community service organization required. Graduate P/NP or letter grading.

M132. Environmentalism: Past, Present, and Fu-
ture. (4) (Same as Geography M115 and Urban Plan-
ning M165,) Lecture, three hours; discussion, one hour. Exploration of history and origin of major environ-
mental challenges, movement that shaped and spawned, and new and changing nature of modern environ-
ment. Introduction to early ideas of environment, humanistic, and anthropocentric environmental thought, and how this was later transformed by 19th-century ideas and rise of American conservation movements. Review of politics of American environ-
ment and thought and contemporary environment. Address questions as they relate to 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 pan-
 zdemics, deforestation, and environmental justice im-
pacts of war. Letter grading.

M133. Environmental Sociology. (4) (Same as Soci-
ology M115.) Lecture, three hours; discussion, one hour. Relationship between society and environment. Analysis in detail of interrelations between social fac-
tors (such as class, race, gender, and religion) and envi-
rionmental factors (such as pollution, waste disposal, sustainability, and global warming). P/NP or letter grading.

M134. Environmental Economics. (4) (Same as Econ-
omics M134.) Lecture, three hours. Requisites: Economics 41 or Statistics 12 or 13, and Economics 101 may be waived with consent of instructor). Intro-
duction to major ideas in natural resources and envi-
rionmental economics, with emphasis on design-
ing 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. California Sustainable Development: Eco-
nomic Perspective. (4) (Same as Public Policy M149 and Urban Planning M163.) Lecture, three hours. Ex-
amination of specific environmental challenges that Cal-
ifornia faces from an economic perspective, using with special emphasis on incentives of polluters to re-
duce their pollution and incentives of local, federal, and state governments to address these issues. Focus on measurement and empirical hypothesis testing. P/NP or letter grading.

M137. Historical Geography of American Environ-
ment. (4) (Same as Geography M137,) Lecture, three hours. Requisites: two years of high school foreign language and four years of history, or consent of instructor. Exploration of systematic changes in natural environment in U.S. during histor-
ical time, with emphasis on interplay between and among natural factors of climate, soils, vegetation, and land use, human factors of settlement, economic activity, technology, and cultural traits. P/NP or letter grading.

138. Effective Methods of Social Change. (4) Le-
ture, three hours; discussion, two hours. Introduction to methods at the intersection of multiple perspectives, including social entrepreneurs, innovators, and visionaries. Review of traditional methods of activism and new the-
ories of nonviolent social change. Case studies of suc-
sessful organizing in the face of social, economic, cur-
ing diseases, overcoming poverty, and addressing oth-
er problems of social injustice as well as reviewing actual strategies and methods for social change in 21st century. Challenges that social and community activists face today, including strategic planning, team management, networking, negotiation, and fund-raising. P/NP or letter grading.

M153. Introduction to Sustainable Architecture and Community Planning. (4) (Same as Architecture and Urban Design CM153,) Lecture, three hours. Re-
lationship of built environment to natural environment throughout time and space, with emphasis on sustainable design of buildings and planning of communi-
ties. Emphasis on energy efficiency, renewable energy, and appropriate use of resources, including water, materials, and land.

M155. Energy in Modern Economy, (4) (Same as Physics M155.) Lecture, three hours. Requisites: Mathematics 3A and 3B (or 3A and 3B), Physics 1A and 1B (or 6A and 6B), Statistics 12 or 13. Examina-
tion of physics of energy, energy demands, energy de-
velopment, and role that energy plays in our economy, par-

157. Energy, Environment, and Development. (4) (Same as Political Science M157.) Lecture, three hours. Requisites: Mathematics 3A and 3B (or 3A and 3B), Physics 1A and 1B (or 6A and 6B). Introduction to basic energy concepts and exami-
nation of role of various energy sources, energy con-
version technologies, and energy policies in modern life. Analysis of implications of current patterns of ener-
gy production and consumption for future economic and environmental well-being. Integration of concepts and methods from physical and life sciences, engi-
neering, environmental science, economics, and public policy. Basic quantitative skills provided to analyze and critique technical, economic, and policy choices to ad-
dress challenge of balancing economic growth and en-
vironmental sustainability. P/NP or letter grading.

160. Topics in Environmental Economics and Pol-
icy. (4) Seminar, three hours. Requisite: Statistics 12 or 13, or consent. Examination of intersection of environmental econom-
ics and policy, with focus on testing policy-relevant environmental hypotheses using economics research approach. Invited scholars present research aimed at understanding and addressing questions as they relate to broader set of questions about climate change, pollution, and transportation. P/NP or letter grading.

M161. Global Environment and World Politics. (4) (Same as Political Science M161.) 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, integrating law, policy, and political science perspectives. P/NP or letter grading.

M162. Land Use and Development. (4) (Same as Urban Planning M162.) Lecture, four hours. Examina-
tion of institutional and historical evolution of land use in U.S. and California, and how land-use policies have evolved in different parts of U.S. and some recent trends in urbanization. Relationship of state-level land-
use policies and politics and ways in which localities plan, environmental, social, and equity aspects of dif-
ferent patterns of urbanization and likely trends into fu-
ture. Letter grading.

163. Business and Natural Environment. (4) (Formerly numbered 188A,) Lecture, three or four hours; discussion, one hour (when scheduled). Analysis of various levels of threats and multidimen-
sional challenges required for mitigating threats. Letter grading.

14. Ocean Environment. (5) Lecture, three hours. In-
roduction to scientific studies of oceans, with emph-
isis on ecosystems and environmental issues. P/NP or letter grading.
166. Leadership in Water Management. (4) Lecture, three hours; discussion, one hour. Limited to juniors/seniors. Examination of water quality and water supply issues, including interactions between scientific, technological, management, and policy issues. Invited experts, scholars, and practitioners discuss relevant issues such as pollution, climate change, and 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.

170. Environmental Science Colloquium. (1) Seminar, 90 minutes; one field trip. Limited to undergraduates. Study of current topics in environmental science, including participation in weekly colloquium series and field trips. May be repeated for credit. P/NP grading.

180A. Practicum in Environmental Science. (4) Lecture, and Laboratory; Discussion M139B. Laboratory, three 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 15 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-180C. Practicum in Environmental Science. (5-5) Laboratory, four hours; field trips. Enforced requisite: course 180A. Course 180B is enforced requisite to 180C. Limited to Environmental Science majors. Investigation of various aspects of one environmental case study presenting actual multidisciplinary issue. Particular emphasis on developing skills towards making contributions as professionals in this field. Work may involve site investigations, original data collection and analysis, mapping and geographic information systems, and environmental policy and law issues. Course may be defined and conducted with collaboration of local agency or nonprofit institution. Letter grading.

184. Basics of Satellite Oceanography. (4) Lecture, two hours; discussion, one hour; computer laboratory, three hours. Remotely sensed data collected since late 1970s provide oceanographers with large volume of information on state of surface of world ocean, including sea surface temperature, chlorophyll, sea surface height anomalies, and wave color properties measured by optical sensors. Multidiscipline information enables comprehensive monitoring of both physical and biological properties of ecosystems in different ocean regions. P/NP or letter grading.

185A. Education for Sustainable Living Program Spear Series. (1) (Formerly numbered 185.) Lecture, two hours. Analysis of principles of sustainability through series of lectures by world-renowned faculty members, authors, environmentalists, and progressive thinkers, with required student response papers. May be repeated for credit. P/NP grading.

185B. Education for Sustainable Living Program 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 teams 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. Education for Sustainable Living Program Action Research Leader. (3) Seminar, two hours; fieldwork, six hours. Students lead research teams to investigate issues of campus sustainability, including energy efficiency, transportation, and 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) 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 and analyze role and influence of local/global context on sustainability behavior of individuals, small businesses, and other institutions in everyday life. Letter grading.

188A-188B. Special Courses in Environment. (2-4) (Formerly numbered 188.) Lecture, three hours (course 188A) and two hours (course 188B). Departmentally sponsored experimental or temporary courses, e.g., such as those taught by visiting faculty members. May be repeated for credit with topic change. P/NP or letter grading.

190. World Civilians. (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.

190. World Civilians. (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.

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.

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 junior/senior Environmental Science majors. Development and completion of honors thesis or comprehensive research project under direct supervision of faculty member. Must be taken for at least two terms and for total of at least 8 units. May be repeated for credit. Individual contract required. Letter grading.

217. Life Sciences

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INTEGRATIVE BIOLOGY AND PHYSIOLOGY

Integrative Biology and Physiology / 399

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Gerald W. Gardner, Ph.D.
Margaret E. Haberle, Ph.D.
Valerie V. Hunt, Ed.D.
Jack F. Keogh, Ed.D.
Marjorie E. Latchaw, Ph.D.
Wayne W. Massey, Ph.D.
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Allan J. Tobin, Ph.D. (Eleanor L. Leslie Professor Emeritus of Neuroscience)

Associate Professors

Rachelle H. Crosbie, Ph.D.
Mark A. Frye, Ph.D.
Stephanie A. White, Ph.D.

Assistant Professors

David W. Walker, Ph.D.
Xinshu Grace Xiao, Ph.D.

Adjunct Professors

Larry Faller, Ph.D.
William C. Whiting, Ph.D.

Adjunct Associate Professor

Nasser A. Farahbakhsh, Ph.D.

Scope and Objectives

The cornerstone of the physiological science curriculum is vertebrate physiology, with emphases on integrative functions. The research and educational programs focus on integrative physiology at several levels of organization, from molecules to living organisms, microscopic structures to macroscopic organization, and cellular properties to organ functions. Students receive comprehensive instruction in all areas of physiological science, while elective courses reflect faculty research expertise, including developmental neurobiology, gene regulation/neural development, cellular neurobiology, molecular neurobiology, neuromuscular physiology, neuroendocrine physiology, cardiovascular physiology, diet and degenerative disease, auditory and visual behavior, biomechanics of rehabilitative medicine, muscle cell biology, inflammatory cell biology, vascular biology, cardiovascular electrophysiology, neuromotor control, and social control of neuronal plasticity.

Applicants interested in pursuing graduate study may apply directly to the interdepartmental Molecular, Cellular, and Integrative Physiology Ph.D. Program (http://www.mcip.ucla.edu) or the interdepartmental Neuroscience Ph.D. Program (http://www.neuroscience.ucla.edu).
Undergraduate Study

Physiological Science B.S.

Preparation for the Major

Life Sciences Core Curriculum

**Required:** Life Sciences 1, 2, 3, 23L; Chemistry and Biochemistry 1A, 14B, 14CL, 14D, or 20A, 20B, 20L, 30A, 30AL, 30B, and 30BL; Mathematics 3A, 3B, and 3C, or 31A, 31B, and 32A; Physics 1A, 1B, 1C, 4A, 4AL, or 6A, 6B, and 6C, or 6AH, 6BH, and 6CH.

To enter the Physiological Science major, students must complete Chemistry and Biochemistry 1A, 1B, or 1C, or 20A, 20B, or 30A, Life Sciences 1, 2, Mathematics 3A, 3B, and 3C, or 31A, 31B, and 32A, and Physics 1A or 6A, with a minimum grade of C in each course and a grade-point average of 2.5 or better in all before Fall Quarter of their third year. Repetition of more than one of these nine preparation courses results in denial of admission to the major. After successful completion of the courses, students must contact the Undergraduate Advising Office to declare the major.

For all preparation courses, students must complete each course with a grade of C or better. Repetition of more than one preparation course results in dismissal from the major.

Transfer Students

Transfer applicants to the Physiological Science major with 90 or more quarter 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, 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 is strongly recommended but not required for admission.

Transfer credit for UCLA Extension coursework and for any departmental courses is subject to prior approval by the department; consult the undergraduate counselor before enrolling in any courses for the major.

Refer to the UCLA Transfer Admission Guide at [http://www.admissions.ucla.edu/prospect/adm_tr.htm](http://www.admissions.ucla.edu/prospect/adm_tr.htm) for up-to-date information regarding transfer selection for admission.

The Major

**Required:** Physiological Science 107, 111A, 111B, 111L, Chemistry and Biochemistry 153A, 153L.

A total of five upper division physiological science electives is required. Eight units of course 199 or 4 units each (8 units total) of courses 198A and 198B, for students in the departmental honors program, may be applied toward the elective requirement. One 200-level graduate course may be applied toward the elective requirement with departmental approval. Courses 189HC, 191H, 192, 193, 195, 196, and graduate courses at the 300, 400, or 500 level may not be applied toward the elective requirement.

Each required and elective course must be taken for a letter grade, and a C average must be maintained in all upper division courses taken for the major. A grade of C or better is required in Physiological Science 107 and 111A to enroll in course 111B. If students fail to meet these requirements, they may be dismissed from the major.

Honors Program

The honors program provides exceptional students with the opportunity for individual research culminating in an honors thesis. Requirements for admission include a 3.0 overall grade-point average and a 3.2 GPA in the life sciences core curriculum. After completion of all requirements and with the recommendation of the faculty adviser, the undergraduate affairs committee confers departmental honors at graduation.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, [http://www.gdnet.ucla.edu/graddiv/gradpro.htm](http://www.gdnet.ucla.edu/graddiv/gradpro.htm). 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 Integrative Biology and Physiology offers the Master of Science (M.S.) degree in Physiological Science.

Physiological Science

**Lower Division Courses**

3. Introduction to Human Physiology. (5) Lecture; three hours; laboratory, two hours. Not open to Physiological Science majors. Courses 3 and 5 may 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; discussion, 30 minutes; laboratory, 90 minutes. 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.


13. Introduction to Human Anatomy. (5) Lecture; four hours; laboratory, five hours. 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 emphasis on computer simulation instead of formulas. Bootstrap and Monte Carlo methods used to analyze physiological data. P/NP or letter grading.

CM102. Basic Human Biology for Biomedical Engineers I (4) (Same as Biomedical Engineering 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.


111A-111B. Foundations in Physiological Science. (6-6) Lecture, four hours; discussion, two hours. Letter grading. 111A. Requisites: course 107, Chemistry 14C or 30B, Life Sciences 1, 2, 3, 4, 23L, Physics 15 or 6B or 2CH. Students must receive grade of C or better to proceed to next course in series. Introduction to principles of muscular and neural physiology, including factors controlling membrane excitability, neuronal circuits, sensorimotor regulation, special senses, cortical functions, and neuronal plasticity. 111B. Requisites: course 111A, Chemistry 14D or 30B. Students must receive grade of C or better to proceed to next course in series. Introduction to principles of systems physiology, including endocrinology, transport physiology, and cardiovascular and pulmonary physiology.

111L. Physiological Science Laboratory. (3) Laboratory, four hours. Requisites: courses 111A and 111B, with grades of C- or better. Required of Physiological Science majors. Designed to illustrate physiological principles studied in courses 111A, 111B. Letter grading.
124. Molecular Biology of Aging. (4) Lecture, three hours. Enforced requisites: Chemistry 153A, Life Sciences 2, 3, 4. Discoveries of new science of aging biology, with examination of aging as plastic trait modulated by genes and physiological processes. Discussion of how these findings integrate with both nutritional and lifestyle factors to impact and complex and profound relationship between underlying aging process and diseases of aging. Topics include dietary restriction, mitochondrial, insulin/IGF signaling, and link between tumor suppression and organismal aging. Letter grading.

125. Molecular Systems Biology. (4) 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 cells. Topics include various -omics fields and high-throughput technologies, network biology, and synthetic biology. Introductory lectures on biomolecular networks, 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 circadian rhythms in physiology and behavior. In many cases these rhythms are generated from within organisms and are called circadian rhythms. Biological basis of these daily rhythms or circadian oscillation of molecular and cellular, and system-level organization of these timing systems. Temporal role of these variations in maintaining homeostasis and rhythms of body and impact on nervous system. Concurrently scheduled with course C226. Letter grading.

133. Exercise Physiology. (5) Lecture, three hours; laboratory, two hours. Requisite: course 111B. Physiological reserves and adaptations to acute and chronic exercise. Letter grading.


144. Neural Control of Physiological Systems. (5) 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. Concurrently scheduled with course C244.

145. Neural Mechanisms Controlling Movement. (5) (Same as Neuroscience M145.) Lecture, four hours. Requisite: course 111A or M180A or Neuroscience M101A. 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. (4) Lecture, four hours. Requisites: courses 107 (or Neuroscience 102) and 111A (or M180A or Neuroscience M101A). Examination of construction of vertebrate nervous system, and beginning development of specific neural circuits in auditory pathway, ganglia, cerebellum, hippocampus, and neocortex. Letter grading.

147. Neurobiology of Learning and Memory. (5) Lecture, four hours; research demonstration, one hour. Requisite: course 111A or M180A. Changes in central nervous system that accompany learning, with emphasis on cellular mechanisms. Letter grading.

148. Neuronal Signaling in Brain. (4) (Same as Neuroscience M148.) Lecture, three hours; discussion, one hour. Requisites: courses 111A or M180A or Neuroscience M101A (or Neuroscience M101B or Chemistry 153A). Consideration of brain function, with focus on cellular physiology and functional roles of neurotransmitters, neuropeptides, and transmitter system, and regulation of intercellular interactions. Letter grading.

149. Mechanisms of Major Human Diseases. (4) Lecture, three hours. Requisites: courses 111A, 111B (111B may be taken concurrently). Integration of principles gained through basic science curriculum with presently understood mechanisms of selected human diseases. Progressive development of these diseases presented in terms of changes in cell biology and function, and changes in regulation of intercellular interactions. Letter grading.


152. Dissection Anatomy. (4) Lecture, two hours; laboratory, six hours. Requisite: course 111B. Departmental application required. Study and dissection of upper and lower extremities of human cadavers; dissection of thorax and abdomen limited to musculature and neurovascular supply.

154. Cellular Communication and Regulation of Physiological Processes. (4) Lecture, three hours. Requisite: limited to seniors/seniors. Signal transduction concepts, with focus on role of receptors, G proteins, and intracellular messengers such as cyclic AMP and calcium. Requisite: course 111A or M180A or Neuroscience M101A. Examination of biochemical and physiological processes, including stimulus-secretion coupling, vascular smooth muscle contraction, and role of growth factors in cell proliferation. Contemporary scientific research articles used as basis for material presented. Students required to present journal article for discussion. Letter grading.

155. Development and Structure of Musculoskeletal System. (4) Requisite: course 111B. Development, histogenesis, and organization of musculoskeletal soft tissues. Integration of knowledge of muscle and connective tissue structure and function on each of these levels to understanding organization and physiological behavior of the intact system.

156. Comparative Animal Physiology. (4) Lecture, three hours; discussion, one hour. Requisites: Life Sciences 2, 3, 4, 23L. Physiological functions and regulation of cardiovascular system, with emphasis on molecular and cellular regulation of cardiovascular functions and whole organism levels of various animals to range of environmental conditions. Major topics include neural and muscular stimulation, and function, intercellular communications, endocrine physiology, and thermoregulation. Examination of wide variety of vertebrates and invertebrates to understand how animals solve physiological challenges presented by physical environment. Letter grading.


158. Ideas and Experiments in History of Physiology. (4) (Same as Neurobiology M168.) Lecture, three hours. Interaction of concepts and experimental techniques in physiology from the early 19th to latter 20th centuries, including accumulation of hormones, nutrition and vitamins, brain, spinal cord, and peripheral nervous system, as well as development of physiology as scientific discipline. Discussion of week-end readings and presentations by students. Letter grading.

173. Anatomy and Physiology of Sense Organs. (4) Lecture, three hours; discussion, one hour. Requisites: courses 111A, or M180A and M180B, or Molecular Cell and Developmental Biology M175A-M175B-M175C. Structure and function of sense organs. Adoption of quantitative and comparative approach to provide insight into evolution of sense organs in both invertebrates and vertebrates. Letter grading.

177. Neuroethology. (5) Lecture, four hours; discussion, two hours. Requisite: course 111A or M180A. Physical properties of animal signals and physiological mechanisms underlying their use in communication. Topics include classical neurological models: acoustic and vibration communication in vertebrates, sound localization in owls, electrosensory and electrocortical communication in electric fish, and neurobiology of birdsong. Letter grading.

M180A-M180B-M180C. Neuroscience: From Molecules to Mind. (5-5-5) (Same as Molecular, Cell, and Developmental Biology M175A-M175B-M175C. Neuroscience: From Molecules to Mind.) Lecture, four hours; discussion, 90 minutes. P/NP or letter grading.

M180A. Cellular and Systems Neurosciences. (5) Lecture, four hours; discussion, 90 minutes. Requisites: Chemistry 14C or 30A (14C may be taken concurrently), Life Sciences 2, Physics 1B or 18B or 68 or 6BH. Not open for credit to students with credit for Physiological Sciences 111A. Enforced requisites: majors only, a grade of C- or better is required to proceed to Physiological Sciences 111B. Cellular neurophysiology, 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.

M180B. Molecular and Developmental Neuroscience. (4) Lecture, four hours; discussion, one hour. Requisites: courses 111A or M180A (or Molecular, Cell, and Developmental Biology M175A or Neuroscience M101A-M101B-M101C, and Psychology M171A-M171B-M171C.) Lecture, four hours; discussion, 90 minutes. P/NP or letter grading.

M180A. Cellular and Systems Neurosciences. (5) Lecture, four hours; discussion, 90 minutes. Requisites: Chemistry 14C or 30A (14C may be taken concurrently), Life Sciences 2, Physics 1B or 18B or 68 or 6BH. Not open for credit to students with credit for Physiological Sciences 111A. Enforced requisites: majors only, a grade of C- or better is required to proceed to Physiological Sciences 111B. Cellular neurophysiology, 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.

M180B. Molecular and Developmental Neuroscience. (4) Lecture, four hours; discussion, one hour. Requisites: courses 111A or M180A (or Molecular, Cell, and Developmental Biology M175A or Neuroscience M101A or Psychology M117A or Psychology 115, Life Sciences 3, 4) may be taken concurrently. Introduction to 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 muscle. Classical experiments and modern molecular approaches in developmental neurobiology. Pr/ NP or letter grading.

180C. Behavioral and Cognitive Neuroscience. (5) Lecture, four hours; discussion, 90 minutes. Requisite: course 111A or M180A (or Molecular, Cell, and Developmental Biology M175A or Neuroscience M101A or Psychology M115). Neurological mechanisms underlying motivation, learning, and cognition. P/NP or letter grading.

M181. Biological Bases of Psychiatric Disorders. (4) (Same as Molecular and Developmental Biology M181, Neuroscience M130, Psychiatry M181, and Psychology M171J.) Lecture, three hours. Requisite: course 111A or M180A (or Molecular, Cell, and Developmental Biology M175A or Neuroscience M101A or Psychology M171A) or Psychology M115. 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.


191H. Honors Seminars: Current Topics in Physiology. (4 Seminar.) Four hours. Requisites or corequisites: 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 in laboratory setting, to be arranged. Requisite: course 107. 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. (2) Discussion, one hour. Requisites: courses 111A and 111B. Corequisite: course 193. Limited to junior/senior physiological science honors program students. Additional course to provide further research opportunities. 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.


Graduate Courses

M200. Advanced Experimental Statistics. (4) (Same as Biostatistics M220.) Lecture, four hours. Introduction to statistics with focus on computer simulation instead of formulas. Bootstrap and Monte Carlo methods used to analyze physiological data. SU or letter grading.

M202. Cellular Neurophysiology. (4) (Same as Neurobiology M200F and Neuroscience M202.) Lecture, three hours; discussion, two hours. Requisites: course 111A (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.

CM203. Basic Human Biology for Biomedical Engineers I. (4) (Same as Biomedical Engineering CM203.) 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 ac- tivities 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 instrumentation and techniques to biomedical facilities. Concurrently scheduled with course CM102. Letter grading.


211. Exercise Cardiovascular Physiology. (4) Attention to cardiovascular adaptations to acute exercise as well as adaptations associated with regular exercise training. Letter grading.

M215. Molecular and Cellular Foundations of Physiology. (5) (Same as Molecular, Cellular, and Integrative Physiology M215.) Lecture, three hours; discussion, two hours. Applications of fundamental 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.

C226. 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 many cases these rhythms are generated from within organisms and are called circadian rhythms. Biological basis of these daily rhythms or cir- cadian oscillations. Exploration of molecular, cellular, and system-level organization of these timing systems. Temporal role of these variations in maintaining homeostatic mechanisms of body and impact on nervous system. Concurrently scheduled with course C126. Letter grading.

M227. Neuroendocrinology of Reproduction. (4) (Same as Neurobiology M227.) Lecture, three hours; discussion, one hour. Preparation: undergraduate level science and chemistry courses, molecular, cellular, and developmental aspects of neuroendocrine and repro- ductive organs, with emphasis on feedback regulato- ry mechanisms between hypothalamic-pituitary and gonadal functions and on functional integration of neuro- endocrine-reproductive axis at cellular and molecular lev- els. Letter grading.

235. Advanced Dynamical Systems Modeling of Physiological Processes. (5) Lecture, four hours; laboratory, two hours. Examination of art of making and evaluating dynamical models of physiological sys- tems and of dynamical principles inherent in physiological systems. Letter grading.

C237. Growth and Adaptation in Cardiovascular System. (4) Lecture, three hours; requisites: course 111B. Discussion of principles of operation of cardio- vascular system with emphasis on physiological function and on functional integration of the cardiovascular system. Letter grading.

241. Neural Plasticity and Repair. (4) Lecture, four hours. Preparation: basic neuroscience background. Progress in basic and clinical science of neuroplasticity provides new insight to understand mechanisms of cell repair and strategies to promote neural healing. Focus on physiological, molecular, and anatomical basis govern- ing synaptic processes in brain disorders and their clinical implications. Letter grading.
C244. Neural Control of Physiological Systems. (5) 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. Concurrently scheduled with course C141.

245. Neural Mechanisms Controlling Movement. (5) Lecture, four hours. Requisite: course 111A or M180A or Neuroscience M101A. Examination of central nervous system organization required for production of movement control such as locomotion, masti- cation, and swallowing. Letter grading.

250A. Muscle Dynamics. (4) Lecture, four hours. Integrated study of electrical and dynamic parameters of muscle in movement, including topics in length-tension, force-velocity interrelationships; critical analysis of electromyographic and digital computer techniques. Letter grading.

C250B. Musculoskeletal Mechanics. (5) Lecture, three hours. Requisite: course 107, Physics 6A. Introduction to biomechanical analysis of human musculoskeletal system. Examination of cinematographic, force platform, and digital computer techniques to characterize and analyze the kinematic and kinetic components of movement. Topics include biomechanics, biodynamics, and modeling. Concurrently scheduled with course C250A. Letter grading.


M255. Seminar: Neural and Behavioral Endocrinology. (2) (Same as Neurobiology M255 and Psychology M294.) Seminar, one hour; discussion, one hour. Topics include the interrelationships between the endocrine system and other systems of the body, especially the brain. Requisite: consent of instructor. Letter grading.

255. Seminar: Neural and Behavioral Endocrinology. (2) (Same as Neurobiology M255 and Psychology M294.) Seminar, one hour; discussion, one hour. Topics include the interrelationships between the endocrine system and other systems of the body, especially the brain. Requisite: consent of instructor. Letter grading.


263. Neural Mechanisms Controlling Rhythmic Movements. (4) (Formerly numbered M263.) Lecture, four hours. Requisite: course M145. Advanced topics on brainstem mechanisms responsible for controlling cyclic and stereotypic movements such as mastication and locomotion. Emphasis on cellular neurophysiology and interaction between neuronal networks. Introduction to primary literature and techniques used in these areas. Students expected to critically evaluate data and conclusions drawn. S/U or letter grading.

270A-270B-270C. Modern Concepts in Physiology. (4-4-4) Lecture, two hours; discussion, two hours. Study and evaluation of primary research literature. Study of foundations of modern techniques in physiologic research, analysis of research design. Letter grading. 270A. Requisite or corequisite: course 111A. Foundation for experimental study of organization and function of nervous system and cellular basis of neural action. 270B. Requisite or corequisite: course 111B. Foundation for experimental study of musculoskeletal, cardiovascular, and respiratory systems. 270C. Requisite or corequisite: course 111C. Foundation for experimental study of general issues and mechanisms in neuroendocrine function.


M290. Seminar: Comparative Physiology. (2) (Same as Ecology and Evolutionary Biology M290.) Seminar, two and one-half hours. Discussion of specific topics in comparative physiology of animals. Topics vary from year to year. Prerequisites: one year of college general biology, one year of college general science, and one year of college psychology, 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 Systems. (2 or 4) Seminar, two hours. Discussion of specific topics related to evolution, embryology, morphogenesis, cytodifferentiation, and onset of function of auditory system, with special attention to centrifugal pathways. 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 mechanisms of movement, mechanical 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.

295A-295B-295C. Seminars: Cellular Neurobiology. (2 to 4 each) Seminar, two to four hours. Topics include synthesis, cellular integration, synaptic processing, central nervous system function, and learning. Students required to present two-hour seminar. S/U or letter grading.


297. 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. S/U grading.

298. Seminar: Nervous System Development. (1 to 2) Seminar, two hours. Selected topics in developmental neurobiology, such as neuronal migration, axonal guidance, gene expression, and synaptogenesis. Weekly primary literature student presentations. 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 current and former faculty members. S/U grading.

459. In-Service Practicum for Teaching Assistants in Physiological Science. (2) Seminar, 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 Studies for Graduate Students. (2 to 8) Tutorial, to be arranged. To enroll for letter grade, petition signed by faculty sponsor, graduate adviser, and graduate affairs committee chair must be submitted prior to end of second week of class. Eight units may be applied toward degree requirements for M.S. or Ph.D. degree, provided that students enroll in two different 4-unit S/U courses in different laboratories under supervision of different mentors. Term paper required for letter grading. S/U or letter grading.

597. Preparation for M.S. Comprehensive Examination or Ph.D. Qualifying Examinations. (2 to 16) Tutorial, to be arranged with faculty member serving as student’s comprehensive examination chair or Ph.D. committee chair. May not be applied toward M.S. or Ph.D. course requirements. May be repeated as necessary. S/U grading.

598. Research for and Preparation of M.S. Thesis. (2 to 16) Tutorial, to be arranged with faculty member serving as student’s thesis committee chair. May not be applied toward M.S. course requirements. May be repeated as necessary. S/U grading.

599. Research for and/or Preparation of Ph.D. Dissertation. (2 to 16) Tutorial, to be arranged. May not be applied toward Ph.D. course requirements. May be repeated as necessary. S/U grading.

International Development Studies

Interdepartmental Program

College of Letters and Science

UCLA

10357 Bunche Hall
Box 951487
Los Angeles, CA 90095-1487
(310) 825-5187
fax: (310) 206-3555
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http://www.international.ucla.edu/idps/idst
Michael F. Lofchie, Ph.D., Chair

Faculty Committee
Edward A. Alpers, Ph.D. (History)
Andrew Apted, Ph.D. (Anthropology, History)
César J. Ayala, Ph.D. (Sociology)
Jorge Bravo, Ph.D. (Political Science)
Judith A. Carney, Ph.D. (Geography)
Sondra Hale, Ph.D. (Anthropology, Women’s Studies)
Patrick C. Heuveline, Ph.D. (Sociology)
Edmond Keller, Ph.D. (Political Science)
Nancy E. Levine, Ph.D. (Anthropology)
Michael F. Lofchie, Ph.D. (Political Science)
Sule Ozler, Ph.D. (Economics)
Michael L. Ross, Ph.D. (Political Science)
Mary A. Yeager, Ph.D. (History)

Scope and Objectives

The International Development Studies major provides an opportunity for interdisciplinary study of the critical issues of the developing world, such as poverty, human rights, global health, civil war, economic growth, and global inequality. The curriculum is intended to familiarize students with some of the more important political, economic, social, and cultural realities of the developing regions of the world, such as Asia, Eastern Europe, Africa, the Middle East, and Latin America. The broad intellectual goal
of the program is to help students understand why there are such vast socioeconomic disparities between the wealthier and poorer regions of the world and what the broader implications of these disparities are. An understanding of these issues is indispensable for both practical and scholarly purposes. While encouraging the acquisition of theoretical and conceptual knowledge, the program is equally concerned with its practical application to global realities. The program, therefore, encourages field experience involving travel, study, and/or work in regions in the developing world.

**Undergraduate Study**

**International Development Studies B.A.**

**Admission**

Admission to the International Development Studies major is by application only. To be eligible to apply, students must have first completed all nonlanguage 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 to the International Development 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) 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 9, (b) Geography 3, 5, 6, (c) Global Studies 1, (d) History 8A, 8B, 8C, 9A, 9D, 9E, 10B, 10BW, 11B, 22, Latin American Studies 97A, Southeast Asian Studies 1, (e) Political Science 20, 50, 50R, (f) Sociology 1, (g) Women’s Studies 10; and (4) demonstrated proficiency in one modern foreign language equivalent to level 6 at UCLA. Each course must be taken for a letter grade.

**Transfer Students**

Transfer applicants to the International Development Studies premajor with 90 or more units must complete the following introductory courses prior to admission to UCLA: two introductory macroeconomics, microeconomics, and/or economic geography courses; one statistics course; three courses, each from a separate category, selected from sociocultural anthropology, cultural or economic geography, cultural area studies, world history, comparative politics, and introductory sociology; 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 at http://www.admissions.ucla.edu/prospect/adm_tr.htm for up-to-date information regarding transfer selection for admission.

**The Major**

Each course must be taken for a letter grade. Students must earn a grade of C or better in International Development Studies 100A, M100B, and 150; no more than one of these three courses may be repeated. All three core courses must be taken prior to the senior seminar 191 course.

**Required:** (1) International Development Studies 100A, M100B, 150, 191; (2) one research methodology course from Anthropology 131, 139, M186, Asian American Studies 103, 104A, 105, M108, 142A, 142D, 187A, 191A, Chicano and Chicano Studies M119, 123, 129, Economics 103, Education C126, Geography 163, Honors Collegium M150, Human Complex Systems M130, Management M118A, Political Science 170A, Sociology 106A, 110, 113, Statistics 112, Urban Planning M122, Women’s Studies 110A; (3) three social and critical theory courses, each from a different department, from Anthropology 130, 150, 152, 153P, 161, 167, Economics 111, 112, Environment M132, M133, M161, Geography 110, M115, 121, M128, 132, 133, 140, 142, 148, 155, 157, Political Science 122A, M122B, 124A, 150, 167A, 167D, 168, Sociology 101, M115, 116, 182, 183, 184, 191D, Urban Planning 121, CM166, Women’s Studies 168; (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 disciplinary elective listed below:


**Eastern Europe and West Central Asia:** Anthropology 175R, Central and East European Studies 126, Czech 155, History 107C, 107E, 120A through 120D, Polish 152, Political Science 128B, 156A through 156D, Romanian 152, Russian 120, 121, 122, 125, 126, M127, 131, Serbian/Croatian 154, Slavic 125, Women’s Studies M127


**Honors Program**

Majors who have completed International Development Studies 100A, M100B, and 150 and who have a 3.5 grade-point average in all courses offered for the major are eligible to formally apply for the honors program. In addition to 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 graduation, 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 produce an exceptional thesis.

**Study Abroad**

International Development Studies majors are highly encouraged to study abroad in developing 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 programs is available through the UCLA International Education Office, B300 Murphy Hall, (310) 825-4995, ieo@international.ucla.edu. See http://www.ieo.ucla.edu.
International Development Studies

Upper Division Courses

100A. Introduction to Development Studies: Economic Development and Culture Change. (4) Lecture, three hours; discussion, one hour (when scheduled). Preparation: some beginning experience in social sciences at college level. Designed for juniors/seniors. Broad historical and theoretical introduction to liberal and Marxist traditions in development studies, with focus on state, market, culture, ideology, and politics of professional knowledge. Balance of general trends and positions with selected case studies in developing nations. Letter grading.

M100B. Introduction to Development Studies: Political Economy of Development. (4) (Same as Political Science M167C.) Lecture, three or four hours; discussion, one hour. Requisite: Economics 1 and 2, and one elementary statistics course. Economic analysis of developing countries. Issues underlying causes of underdevelopment and process of development. Topics include population growth, poverty, inequality, inflation, fiscal and monetary policy, and alternative development strategies. Letter grading.

188. Special Courses in International Development Studies. (4) Seminar, three hours. Program-sponsored 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 grading.

191. Variable Topics Research Seminars: International Development Studies. (4) Seminar, two hours; practicum, to be arranged. Limited to juniors/seniors. Supervised intensive directed research program in which students conduct interdisciplinary research under guidance of faculty mentor. Culminating paper required. May be applied toward major via petition. May not be repeated. Individual contract required. Letter grading.

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. Culminating paper required. May be applied toward major via petition. May not be repeated. Individual contract required. Letter grading.

ISLAMIC STUDIES

Interdepartmental Program

College of Letters and Science

UCLA
10373 Bunche Hall
Box 951487
Los Angeles, CA 90095-1487

(310) 206-6571
fax: (310) 206-3555
e-mail: idps@international.ucla.edu
http://www.international.ucla.edu/idps/islamicstudies/

Khaled M. Abu El Fadi, M.A., J.D., Ph.D., Chair

Faculty Committee
Khaled M. Abu El Fadi, M.A., J.D., Ph.D. (Law)
Asli U. Balti, M.PhiL., M.A., J.D., Ph.D., Acting (Law)
Ali Behdad, Ph.D. (Comparative Literature, English)
Irene A. Bierman-McKinney, Ph.D. (Art History)
Michael D. Cooperson, Ph.D. (Near Eastern Languages and Cultures)
Osman M. Galal, M.D., Ph.D. (Community Health Sciences)
Nile S. Green, Ph.D. (History)
Sondra Hale, Ph.D. (Anthropology, Women’s Studies)
Aamir R. Mutti, Ph.D. (Comparative Literature)
Allen F. Roberts, Ph.D. (French and Francophone Studies, World Arts and Cultures/Dance)
Susan E. Szymovics, Ph.D. (Anthropology, Near Eastern Languages and Cultures)
Dominic R. Thomas, Ph.D. (Comparative Literature, French and Francophone Studies, Italian)

Scope and Objectives

The Islamic Studies Interdepartmental Program encompasses the broadest cultural concerns in the study of Muslim societies of the past and present. It provides opportunities for study of the major cultures, languages, literatures, legal theories, medical systems, artistic practices, and religious traditions of the populations of regions where Islam has had, or continues to have, the greatest impact. Within a broad interdisciplinary framework of the humanities, social sciences, and professional schools (e.g., law, public health, the arts), students are expected to acquire knowledge of several different aspects of Muslim societies and to develop skills in cultural analysis, out of which they construct individualized curricula that prepare them to carry out original research.

The Master of Arts and Ph.D. degrees in Islamic Studies are designed primarily for students pursuing academic careers. The degree programs also provide useful for students who plan to live or work in predominantly Muslim areas or those whose careers may be enhanced by a knowledge of Muslim people, languages, and institutions.

Graduate Study

The Graduate Council of the UCLA Academic Senate suspended admissions to the Islamic Studies M.A. and Ph.D. programs effective Fall Quarter 2009.

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://www.gdnet.ucla.edu/gasaa/library/pgmrqintro.htm. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees

The Islamic Studies Program offers Master of Arts (M.A.), Candidate in Philosophy (C.Phil.), and Doctor of Philosophy (Ph.D.) degrees in Islamic Studies. A concurrent degree program (Islamic Studies M.A./Public Health M.P.H.) is also offered.

Islamic Studies Graduate Course

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 methodologies and current theories and how they may be used and combined by Islamic studies students. Content varies each year. Letter grading.

ITALIAN

College of Letters and Science

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Box 951535
Los Angeles, CA 90095-1535

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http://www.italian.ucla.edu

Dominic R. Thomas, Ph.D., Chair

Professors
Michael J.B. Allen, Ph.D., D.Litt.
Massimo Claviola, Ph.D. (Franklin D. Murphy Professor of Italian Renaissance Studies)
Thomas J. Harrison, Ph.D.
Lucia Re, Ph.D. Dottore in Lettere
Dominic R. Thomas, Ph.D.
Edward F. Tuttle, Ph.D.

Professors Emeriti
Luigi Ballerini, Dottore in Lettere
Franco Betti, Ph.D.
Marga Cottino-Jones, Ph.D., Dottore in Lettere

Lecturer S.O.E.
Elissa A. Tognozzi, Ph.D.

Lecturer
Hoang T. M. Truong, Ph.D.

Adjunct Assistant Professor
Pasqualino Marino
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 UCLA faculty views 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 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 Ph.D. (literature specialization).

Undergraduate Study

Italian B.A.

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 related courses in civilization, culture, history, linguistics, literature, and closely related languages.

Refer to the UCLA Transfer Admission Guide at http://www.admissions.ucla.edu/prospect/adm_tr.htm for up-to-date information regarding transfer selection for admission.

The Major

Required: Eleven upper division Italian courses, including 100, 103A, 103B, one medieval to 18th century course from 113 through 118, one Enlightenment to contemporary course from 119 through 125, and six elective courses from 113 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 B.A.

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 at http://www.admissions.ucla.edu/prospect/adm_tr.htm 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, 46, 50A, 50B; Anthropology 8 or 9, and 33.

The Major

Required: Italian 100, 103A or 103B, 180, 195, and three courses from 113 through 191 selected in consultation with the undergraduate adviser; five courses from Anthropology 111, 112, M115A, M115B, C115R, 130, 133Q, 135A, 135B, 135C, 135S, 135T, 139, M140, 141, 143, 150 through M154Q, 161, 182, 183 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, 46; Art History 50 or 51, 54, 57.

The Major

Required: Italian 100, 103A or 103B, 195, and four courses from 113 through 191 selected in consultation with the undergraduate adviser; six courses from Art History M102F, M102G, M102H, 105A through 105D, 105F, 106A through 106D, C109A, 109C, 110A, 110B, 110F, 127, 150D 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, 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, 103A or 103B, 180, 195, and two courses from 113 through 191 selected in consultation with the undergraduate adviser; Greek 100 or Latin 100, one course from Classics 141 through 197, and one course 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, 46, 50A, 50B; English Composition 3, English 4W; 10A, 10B, 10C.

The Major

Required: Italian 100, 103A or 103B, 195, and four courses from 113 through 191 selected in consultation with the undergraduate adviser; four courses from English 100, M101A through 119, 121, 140A through 182C 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, 103A or 103B, 121, 195, and three courses from 113 through 191 selected in consultation with the undergraduate adviser; six courses from Film and Television 106A, 106B, 106C, 107, 108, 110A, 110C, 112 through 116, 193A 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, 46; French 1, 2, 3, 4, 5, 6, 12 or 14.

The Major

Required: Italian 100, 103A or 103B, 195, and four courses from 113 through 191 selected in consultation with the undergraduate adviser; one course from French 114A, 114B, 114C, and three courses from 115 through 142 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, 46; one course from History 1A, 1B, 1C, 88.

The Major

Required: Italian 100, 103A or 103B, 180, 195, and three courses from 113 through 191 selected in consultation with the undergraduate adviser; six courses from History 100, 102, 119A through 119D, 121A through 123B, 128A, 128B, 131A through M133B selected in consultation with the undergraduate adviser.

Linguistics Field

Preparation for the Major

Required: Italian 1, 2, 3, 4, 5, 6, Linguistics 20, and six terms of a second Romance language or Latin or equivalent.

The Major

Required: Italian 100, 103A or 103B, 180, 195, and two courses from 113 through 191 selected in consultation with the undergraduate adviser; Linguistics 103, 110, 120A, 120B, and one course from M146, M150, 165A, 165B, 170
selected in consultation with the undergraduate adviser.

**Music History Field**

**Preparation for the Major**

*Required:* Italian 1, 2, 3, 4, 5, 6, Music History 2A, 2B, 26A, 26B, 26C. *Recommended:* Music 20A, 20B, 20C.

**The Major**

*Required:* Italian 100, 103A or 103B, 191, and four courses from 113 through 191 selected in consultation with the undergraduate adviser; five courses from Music History 126A, 126B, 126C, 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, 46, 50A, 50B; one course from Philosophy 1 through 31.

**The Major**

*Required:* Italian 100, 103A or 103B, 191, and four courses from 113 through 191 selected in consultation with the undergraduate adviser; Philosophy 100A, 100B, 100C, and three courses from M101A through 185 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, 46, 50A, 50B; Political Science 10, 20.

**The Major**

*Required:* Italian 100, 103A or 103B, 191, and four courses from 113 through 191 selected in consultation with the undergraduate adviser; six courses from Political Science M111A through 113A, 116A through 119, 137A, 137B, 139, 153A, 155, 167A 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, 25, M42 or M44 or 46.

**The Major**

*Required:* Italian 100, 103A or 103B, 180, 195, and three courses from 113 through 191 selected in consultation with the undergraduate adviser; three courses from Portuguese 120A 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, 103A or 103B, 180, 195, and three courses from 113 through 191 selected in consultation with the undergraduate adviser; one course from Spanish 120A or 120B and three courses from 122 through 161 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, 46, 50A, 50B.

**The Major**

*Required:* Italian 100, 103A or 103B, 122, 195, and three courses from 113 through 191 selected in consultation with the undergraduate adviser; one course from Theater 101A, 101B, 101C and five courses from 105, 111A, Classics 143A, English 150A, 150B, 150C, 172B selected in consultation with the undergraduate adviser.

**Women's Studies Field**

**Preparation for the Major**

*Required:* Italian 1, 2, 3, 4, 5, 6, and one course from 42A, 42B, 46; Women's Studies 10.

**The Major**

*Required:* Italian 100, 103A or 103B, M158, 195, and three courses from 113 through 191 selected in consultation with the undergraduate adviser; Women's Studies 110A or 110B, and five additional upper division courses from any of the women's studies course lists 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's own programs in Italy and Los Angeles. For additional information, contact the Education Abroad Program, B300 Murphy Hall, or the Summer Sessions Office, 1147 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. Consult the department adviser for more information.

**Requirements**

To qualify for graduation with honors, Italian majors must complete all requirements for the major, one additional upper division (Italian 102A and above) or graduate-level (with consent of the instructor) course in which they write a 10- to 12-page research paper in Italian, and Italian 199A in the last term of the senior year in which they write an additional 20- to 25-page thesis in Italian on a subject expanding on one or more 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 199B in which they write a 40- to 50-page thesis in either English or 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.

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, http://www.gdnet.ucla.edu/gasaa/library/pgmrqintro.htm. 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 (M.A.), Candidate in Philosophy (C.Phil.), and Doctor of Philosophy (Ph.D.) degrees in Italian.

**Italian Lower Division Courses**

1. Elementary Italian — Beginning. (4) Lecture, five hours. P/NP or letter grading.

1G. Special Reading Course. (4) Readings, three hours. Open to graduate students in other fields. Preparation for Graduate Division foreign language reading requirement. S/U grading.


2G. Special Reading Course. (4) Readings, three hours. Open to graduate students in other fields. Preparation for Graduate Division foreign language reading requirement.


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-42B-42C. Italy through Ages in English. (5-5-5) Lecture, four hours; discussion, one hour. P/NP or letter grading.

42A. Early Modern Italy. Survey of Italy’s unique contribution to Western civilization in development of culminating project. May be repeated once for credit. P/NP or letter grading.

42B. Modern and Contemporary Italy. Cultural and political developments from 16th century to present. Topics include Beccaria and opposition to death penalty and absolutism; Garibaldi, Italian Risorgimento, national liberation, and unification; Lombaro and criminality in new Italy; Mussolini and Fascism; Gramsci and Communism; Italian Catholicism; Berlusconi and media; migration and today’s multiethnic Italy. Assigned works include relevant literature and memoirs, music, and film, from futurist and fascist art, and organized crime fiction and film.

42C. Food and Literature in Italy. Profile of Italian history and culture through analysis of gastronomic and literary texts. Special emphasis on late Middle Ages, Renaissance, and Risorgimento.

46. Italian Cinema and Culture in English. (5) Lecture/ screenings, five hours; discussion, one hour. Special topics in Italian culture as reflected and reinforced by the nation’s prime artform, stressing aesthetics and ideology of film. Films on Italian history, and cinematic arts. Rotating 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. P/NP or letter grading.

50B. Middle Ages to Baroque. Leading philosophical, religious, and sociopolitical issues in Europe examined in authors such as St. Francis, Dante, Boccaccio, Petrarch, Lorenzo de’ Medici, Machiavelli, Castiglione, Ariosto, and Tasso. 50B. Enrichment for students of Italian language program equivalent to first year of college Italian.

114A-114B. Middle Ages. (4-4) Lecture, three hours. Enforced requisite: course 100. Taught in Italian. P/NP or letter grading. 114A. Dante’s La Divina Commedia. (4) Lecture, three hours. Enforced requisite: course 100. Taught in Italian. P/NP or letter grading. 114B. Tradition of Love from Sacred to Profane. Study of major love poets of all time (Dante, Dolce Stil Novo poets, and Petrarca) caught between courtly and religious codes. P/NP or letter grading.


118. Italian Enlightenment. (4) Lecture, three hours. Enforced requisite: course 100. Taught in Italian. Study of philosophical and political prose, satiric poetry, and drama in 18th century, with focus on Voltaire, Swift, Goldoni, Vico, Metastasio, Serpi, and Affieri. P/NP or letter grading.


120. Modern and Contemporary Literature. (4) Lecture, three hours. Enforced requisite: course 100. Taught in Italian. Analysis of novels, short fiction, poetry, and drama in connection with modern and contem- porary history, politics, and society. Authors may include D’Annunzio, Aleramo, Pirandello, Ungelette, Montale, Pasolini, Ortese, Morante, Ginzburg, Calvino, Fo, Eco, Celati, and Tabucchi. P/NP or letter grading.

121. Italian Theater. (4) Lecture, three hours. Enforced requisite: course 100. Taught in Italian. Study of works for stage from Renaissance to present, includ- ing examples of opera and questions pertaining to acting, staging, and performance. May include texts by Machiavelli, Aretino, Affieri, Gozzi, Goldoni, Verdi, Puc-cini, d’Annunzio, Amelia Rosselli, Dacia Maraini, Dario Fo, and Franca Rame. P/NP or letter grading.

122. Italian Theater. (4) Lecture, three hours. Enforced requisite: course 100. Taught in Italian. Study of works for stage from Renaissance to present, includ- ing examples of opera and questions pertaining to acting, staging, and performance. May include texts by Machiavelli, Aretino, Affieri, Gozzi, Goldoni, Verdi, Puc- cini, d’Annunzio, Amelia Rosselli, Dacia Maraini, Dario Fo, and Franca Rame. P/NP or letter grading.

123. Modern Italian Cultural Studies. (4) Seminar, three hours. Enforced requisite: course 100. Taught in Italian. Reading, research, and writing on various cul- tural topics of modern and contemporary Italy. En- cration of contemporary Italian food culture, fashion and design, photography and visual arts, mass media, politics, music, and sports. P/NP or letter grading.

124. Food and Literature in Italy. Three hours. Enforced requisite: course 100. Taught in Italian. Profile of Italian history and culture through analysis of gastronomic documents and literary texts, with special emphasis on late Middle Ages, Renaissance, and Risorgimento. Examination of relation of food and health sciences through analysis of Regina Sante- tis, authored by various medical doctors of Salienian Schools and Platina’s Il piacere onesto e la buona sa- lute. P/NP or letter grading.

125. Italian through Opera. (4) Lecture, three hours. Enforced requisite: course 6. Taught in Italian. Introduction to traditional Italian opera as means of appreciating cul- ture of Italy. Traditional operas are means of appreciating culture of Italy. Art form of opera, and study of Italian lan- guage at advanced level through reading of libretti. Six masterworks of Italian opera tradition — Il Barbiere di Siviglia, La Traviata, La Bohéme, Pagliacci, and La Traviata — offer culturally authentic 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- velopment of Italian novella in its structure, historical context, and folk material. Special emphasis on how Italian novella influenced other European literatures. P/NP or letter grading.

150. Modern Fiction in Translation. (4) Lecture, three hours. Select issues in 20th-century thought traced in writers of international fame, with focus on contemporary novel and stories of several important writers, such as Umberto Eco’s The Name of the Rose, Pasolini’s The Ragazzi, Pirandello’s The Late Mattia Pascal, and Cal- vino’s The Cosmocismica. P/NP or letter grading.

M158. Women, Gender, and Sexuality in Italian Cul- ture and Literature in Translation. (4) 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, 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. Enforced requisite: course 100. Taught in Italian. Main forces that have shaped literary or standard Italian and specific ways in which language has evolved. Tracing of its changing relations with other Eu- ropean languages and influences of other languages; its growth and development throughout history; events in the cultural life of the nation; changes in creative expression, and other cultural phenomena. P/NP or letter grading.

191. Variable Topics Research Seminars: Italian Studies. (4) Seminar, three hours. Research seminar will focus on themes connected with Italian literature topics covered in regular departmental undergraduate courses. Reading, discussion, and de- velopment of culminating 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 in- structor 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.

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 Research in Italian and Special Fields. (2 to 4) Tutorial, to be arranged. Limited to senior Italian and Special Fields majors. Supervised individual research or investigation under guidance of faculty mentor. Tutorial in which paper (20 to 25 pages) is to be written in either Italian or English that requires students to unify and synthesize their experience of combining two disciplines of study. Individual contract required. P/NP or letter grading.

Graduate Courses

201. Bibliography and Methods of Research. (4) Lecture, three hours; discussion, one hour. S/U or letter grading.

205A-205B. Studies in Criticism. (4-4) Lecture, three hours. History, theory, and practice of criticism. S/U or letter grading. 205A. Brief History of Literary Criticism. Presentation, discussion, and application of basic currents of criticism from stylistics to structuralism. 205B. Discussion of Modern Critical Approaches. Presentation, discussion, and application of contemporary approaches from structuralism to deconstruction, new historicism, 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.


221A-221E. Studies in 20th-Century Literature. (4 each) Lecture, three hours. S/U or letter grading: 221A. Variable Topics. (4) Lecture, three hours. Variable-content seminar on themes and issues of 20th-century literature, with coverage of authors such as D’Annunzio, Verga, Marinetti, and Pirandello. S/U or letter grading; 221B. Contemporary Poetry. (4) Lecture, three hours. Analysis of legacy of major two figures in Italian poetry from World War II — Ungaretti and Montale. Thorough examination of movements and individual poets active in the 1960s and 1970s. S/U or letter grading.

221C. 20th-Century Narrative to World War II. (4) Lecture, three hours. Assessment of turn-of-the-century narrative pattern (Gabriele D’Annunzio) and analysis of radical innovations brought about by such towering figures as Pirandello, Svevo, Bernari, Marinetti, etc. S/U or letter grading.

221D. 20th-Century Narrative since World War II. (4) Lecture, three hours. In-depth exploration of some major works that portray Italian literature famous throughout the world, with special emphasis on study of formalistic modes adopted by the neo-avant-garde. S/U or letter grading.

221E. Pirandello and Contemporary Theater. (4) Lecture, three hours. Thorough reading of theatrical texts, accompanied by analysis of how the plays have been realized on stage by important directors such as Stre- hler, Ronconi, and the playwrights/actors themselves. Emphasis on ritualistic implications of the theatrical performance. S/U or letter grading.

222A-222B. Comparative Romance Historical Grammar. (4-4) Formerly numbered M222A-M222B. (5) Lecture, three hours. Each course may be taken independently for credit. S/U or letter grading. 222A. Phonology. Principal sound changes from late Latin to main Romance dialects. 222B. Morphology and Syntax. Prime morpho-syntactic changes occurring between late Latin and main Romance dialects.

223. Structures of Modern Italian. (4) Lecture, three hours. Descriptive analysis of basic features of standard Italian from phonological, morphological, and syntactic perspectives. S/U or letter grading.

224. Italo-Romance Dialectology. (4) Lecture, three hours. Differentiation of late spoken Latin into myriad varieties spoken in Italy and consideration of language types (e.g., Sardinian, Ligurian, Friulian, and Franco-Provenzal). Consideration of present-day sociolinguistics pressures. S/U or letter grading.

225. Cultural History of Italian Language. (4) Lecture, three hours. Historical survey of development of Italian language from medieval times to unification of country in 1861. Questione della lingua, general acceptance of Florentine speech, and its evolution into national language. S/U or letter grading.

230A-230B. Folk Traditions in Italian Literature. (4-4) Lecture, two hours. S/U or letter grading.

250A-250D. Seminars: Dante. (4 each) Seminar, three hours. 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 Seminar, three hours. S/U or letter grading.

257A-257B. Seminars: Romanticism. (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. Consideration of the 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.

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. Seminar focusing on themes and issues outside the uniquely Italian literature topics covered in regular departmental graduate courses.

M299. Research Resources for European Studies. (2) (Same as French M299, German M299, Informa- tion Studies M299, Slavic M299, and Spanish M299.) Lecture, two hours. Essentials of library research strategy and effective searching in key print and online resources for European and Russian studies. Through combination of lecture, online demonstration, and hands-on activities in and outside class, students understand how to efficiently use library and databases.

Labor and Workplace Studies

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation: apprentice personnel employed 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 M.A. 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 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 Studies. (2 to 12) May be repeated twice for credit. S/U grading.

597. Preparation for M.A. Comprehensive Examination or Ph.D. Qualifying Examinations. (2 to 12) S/U grading.


LABOR AND WORKPLACE STUDIES
Interdisciplinary Minor College of Letters and Science

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http://www.lab.ucla.edu/minor/

Frank T. Higbie, Ph.D., Chair
Faculty Committee
Christopher L. Erickson, Ph.D. (Management)
Frank T. Higbie, Ph.D. (History)
Sanford M. Jacoby, Ph.D. (Management)
Jacqueline Leavitt, Ph.D. (Urban Planning)
Ching Kwan Lee, Ph.D. (Sociology)
Karen J. Orren, Ph.D. (Political Science)
Christopher C. Tilly, Ph.D. (Urban Planning)
Abel Valdezuela, Jr., Ph.D. (Chicana and Chicano Studies, Urban Planning)

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 at the Center for Labor Research and Education, 1103E Ueberroth Building, (310) 206-0812, Lsminor@irle.ucla.edu. Students are encouraged to meet early with the faculty adviser and minor coordinator to declare the minor and design a coherent program of coursework.

Required Courses (28 units minimum): Seven courses, with no more than two lower division courses (8 units), selected from Afro-American Studies M173, Asian American Studies M113, M116, Chicana and Chicano Studies M125, M127, M128, 129, Economics 150, 151, History 141B, 146A, 146B, any labor and workplace studies course, course, Management 180, Political Science 116A, 142C, Psychology M137E, Public Policy 141, 144, 145, Sociology 157, M163, 171, 173, Women's Studies M137E, M163. Students may petition, prior to enrollment, to apply other topical courses with substantial labor and workplace studies content.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major or minor requirements in another department or program. No more than 8 units may be applied toward both this minor and a major in another department or program.

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-M1B-M1CW. Work, Labor, and Social Justice in U.S. (6-6-6) (Same as GE Clusters M24A-M24B-M24CW) 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. 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 requisites course of M1B. Topics include labor law/history, gender, race, and workplace. Satisfies Writing II requirement.

Upper Division Courses

M114C. African American Political Thought. (4) (Same as Afro-American Studies M114C 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.

M115. Asian American Social Movements. (4) (Same as Asian American Studies M115.) Lecture, three hours. Designed for juniors/seniors. Examination of several dimensions of Asian American social movements, including grassroots, mass movement character, political and social visions, 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 Studies 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 or other labor issues. 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 the analysis and extent of urban and rural poverty and contemporary Latina/Latino population in U.S. Special emphasis on anti-poverty policies of government in Latino communities and social planning and economic development strategies. Attention also to literature underclass. Letter grading.


M123. Chicano/Latino Community Formation: Critical Perspectives and Oral Histories. (4) (Same as Chicana and Chicano Studies M119.) Lecture, four hours. Exploration of historical formation and development of Chicano/Latino communities in 20th century, with focus on labor, immigration, economic structures, electoral politics, and international dimensions. 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.
M127. Farmerworker Movements, Social Justice, and AFL-CIO. (4) (Same as Chicana and Chicano Studies M127.) Lecture, four hours. Designed for junior/seniors. Historical and social context of farmworker organizing, including its multiracial origins and its influence on fight for equality of working women. Specific focus on organizing, strategy of Farm Workers and Farm Laborers Organizing Committee, and their relationship to AFL-CIO, other unions, and their influence on Chicano Movement. Letter grading.

M128. Race, Gender, and U.S. Labor. (4) (Same as Chicana and Chicano Studies M128.) Lecture, four hours. Designed for juniors/seniors. Introduction to history and organization of labor movement in U.S. and North America. Discussion of race, class, and gender issues raised within movement, and various strategies for social change and economic justice pursued through organized labor and other means. Letter grading.

M144. Women's Movement in Latin America. (4) (Same as Chicana and Chicano Studies M144 and Women's Studies M144.) Lecture, four hours. Course on women's movements and feminism 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 feminism and women's consciousness that have emerged out of processes of rights movement, environmental struggles, labor movements, Christian-based communities, peasant and rural organizing, and new social movements that are concerned with race, sexuality, and class. Through comparative study of women's movements in diversity of political systems as well as national and transnational arenas, including resistance to historical conditions and political conditions that give rise to women's resistance, as well as major debates in field of study. P/NP or letter grading.

M149. Media: Gender, Race, Class, and Sexuality. (9) (Same as Communication Studies M149 and Women's Studies M149.) Lecture, four hours; activity, one hour. Limited to junior/senior Communication Studies and Women's 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 people, classes, relay situations, and other subaltern or subordinate groups are presented and often misrepresented in media. Focus on employment and application of communications and feminist theories for understanding ideological nature of stereotyping and political representations through use of media, guest presenters, class discussions, and readings. Introduction to theory and practice of cultural studies. Letter grading.

160. Research Group or Internship Seminars: Labor and Workplace Studies. (5) Seminar, three hours. Enforced corequisite: course 195. Designed for undergraduate students who are part of research group or internship. Discussion of research methods and current literature in field of study. May be repeated for credit. Individual contract with supervising faculty member required. P/NP or letter grading.


M166. Research on Immigration Rights, Labor, and Higher Education. (4) (Same as Asian American Studies M166A and Chicana and Chicano Studies M166A.) Seminar, three hours. New immigrant rights movement, with particular focus on “chicanismo.” 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 issue of immigration students in higher education, challenges facing undocumented immigrant students, and legislative and policy issues that have emerged. Students conduct oral histories and 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 M166B.) Seminar, two hours. Two-hour discussion seminar on immigration and civic engagement. Expansion of research conducted by students in course M166A involving oral histories, research on immigration/labor/higher education, and evaluation of legislation and policies 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.

M172. Free Speech in Workplace. (4) (Same as Communications 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 Afro-American Studies M173 and Chicana and Chicano Studies M173.) Lecture, three hours; discussion, one hour. Overview of nonviolence and its impact on social movements both historically and in its present day manifestation 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 U.S. history. Examination of particular strategies and tactics of nonviolent movements as they impact social change organizing in Los Angeles. P/NP or letter grading.

M175. Agitational Communication. (4) (Same as Communication Studies M175.) Lecture, four hours; discussion, one hour (when scheduled). Theory of agitation; agitation as force for change in existing institutions and political society. Intensive study of selected agitational movements and technique and content of their communications. Letter grading.

M176. Visual Communication and Social Advocacy. (4) (Same as Communication Studies M176.) Lecture, four hours. Visual communication reaches diverse audiences in communicating major social and political topics. Cartoons, posters, murals, and documentary photography have had powerful world impact. Survey of all four genres of visual communication as features of modern mass media. Letter grading.

M180. Southern California Regional Economy. (4) (Same as Urban Planning CM180.) Lecture, three hours. Introduction to regional economy, with emphasis on Los Angeles area and its 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 economists. Letter grading.

188. Special Courses in Labor and Workplace Studies. (4) Seminar, four hours. Program-sponsored experimental or temporary courses, such as those that are not part of regular offerings. May be repeated for credit. P/NP or letter grading.

194. Research Group Seminars: Labor and Work- place Studies. (4) Seminar, 90 minutes. 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 members and/or students. May be repeated for credit. P/NP or letter grading.

195A. Community or Corporate Internships in Labor and Workplace Studies. (5) (Formerly numbered 195.) Tutorial, one hour; internship, 15 hours. Enforced corequisite: course 180. 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. 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 / 411

LATIN AMERICAN STUDIES

Interdepartmental Program
College of Letters and Science

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Kevin B. Terraciano, Ph.D., Chair

Faculty Committee
César J. Ayala, Ph.D. (Sociology)
Stephen A. Bel, Ph.D. (Geography)
Charlene Villaseñor Black, Ph.D. (Art History)
Jorge Bravo, M.Phil., Ph.D. (Political Science)
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 course 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 Bachelor of Arts and Master of Arts degrees. In the undergraduate major students develop a program combining language and methodological training with interdisciplinary studies in one of three areas: arts and humanities, social sciences, or ecology and environment. At the graduate level, students pursue more 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 M.A. in Latin American Studies with a master’s degree in a professional field.

Undergraduate Study
Latin American Studies B.A.
Undergraduate studies of the Latin American region are designed to serve the needs of students desiring a general education focused on the Latin American cultural region and those preparing for advanced academic study of Latin America.

Students must complete all preparation courses with a C (2.0) in each course.

Foreign Language Requirement
Majors must show proficiency in two Latin American languages — the primary language through the advanced level (Spanish 25 and 27, or Portuguese 25 and 105) and the secondary language through the intermediate level (Portuguese 3, 102B, or Spanish 5). An indigenous language of Latin America (i.e., Quechua) may be substituted for the secondary language.

Transfer Students
Transfer applicants to the Latin American Studies major with 90 or more units must complete the following introductory courses prior to admission to UCLA: advanced Spanish and one year of elementary Portuguese, or advanced Portuguese and intermediate Spanish, two Latin American history courses, and additional coursework in the area of concentration.

Refer to the UCLA Transfer Admission Guide at http://www.admissions.ucla.edu/prospectadm_tr.htm for up-to-date information regarding transfer selection for admission.

Course Limitations
Students may not take more than 8 units of Latin American Studies 199 for letter-grade credit nor more than 8 units in any single term. No course taken on a Passed/Not Passed basis may be applied toward the B.A. degree requirements. In order to register in a 199 course, students must have advanced junior standing and an overall grade-point average of 3.0, or senior standing.

Core Areas for the Major
Students select one of three core areas as the focus of their major: arts and humanities, social sciences, or ecology and environment. Requirements for each core area are listed below.

Core I: Arts and Humanities
Preparation
Required: Two courses from History 8A, 8B, 8C; Latin American Studies 97A (or 191 with department consent); Spanish 44; Art History 55B or Ethnomusicology 91K, and Dance 6 or 8.

Core Area
Required: Ten upper division courses from the approved list of Latin American courses distributed as follows:

Core Concentration: Five courses as listed below in either the literature and folklore field or the linguistics field selected from Portuguese or Spanish, or in the fine arts field selected from art history or ethnomusicology. Only one course from the electives list within the arts and humanities core area may be applied toward the core concentration.

Theory and Methods: One course from theory and methods within the core concentration field.

Internal Breadth: Four additional courses from the arts and humanities core area but outside the core concentration field. No more than two of these may be electives.

External Breadth
Required: From the approved list, six upper division courses outside the arts and humanities core area distributed as follows: at least two courses in social sciences (e.g., history) and two courses in ecology and environment (e.g., geography). The two additional courses required may be from either social sciences or ecology and environment. No more than three external breadth courses may be electives.

Approved Undergraduate Courses
(1) Literature and Folklore Field
History 160A, Portuguese 130A, 130B, C132, C133, C134, C135, 141, Spanish 120A through 120D, 137, 139, 140, 142, 143, 144A, 144B, 144C, 147, 149, 151B, 161, 191A, 191B, 198

Theory and Methods
Portuguese 197, Spanish 119A, 119B, 119C, 197, World Arts and Cultures 122

(2) Fine Arts Field

Theory and Methods
Art History 197, Ethnomusicology 180, 183, 197E, Film and Television 199, World Arts and Cultures 199

(3) Linguistics Field

Theory and Methods
Linguistics 103, 110, 120A, 120B, M146, 165A, 165B, 170, 197, Portuguese 197, Spanish 197

(4) Arts and Humanities Electives
Chicana and Chicano Studies 142, 147, Ethnomusicology M110A, M110B, Film and Television 112, Latin American Studies 191, 199, Theater M103C, World Arts and Cultures 131

Core II: Social Sciences
Preparation
Required: Two courses from History 8A, 8B, 8C; Latin American Studies 97A (or 191 with department consent); Economics 1 and 2, or 100; Statistics 10.

Core Area
Required: Ten upper division courses from the approved list of Latin American courses distributed as follows:

Core Concentration: Five courses as listed below in one of the five fields (anthropology and sociology or economics or geography or history or political science). Only one course from the electives list within the social sciences core area may be applied toward the core concentration.

Theory and Methods: One course from theory and methods within the core concentration field.

Internal Breadth: Four additional courses from the social sciences core area but outside the core concentration field. No more than two of these may be electives.

External Breadth
Required: From the approved list, six upper division courses outside the social sciences core area distributed as follows: at least two courses in arts and humanities (e.g., fine arts) and two courses in ecology and environment (e.g., geography). The two additional courses required may be from either arts and humanities or ecology and environment. No more than three external breadth courses may be electives.

Approved Undergraduate Courses
(1) Anthropology and Sociology Field
Anthropology 114P, 114Q, 114R, 173Q, 174P, 179, Sociology 186

Theory and Methods
Anthropology C114S, 115P, C115R, 136Q, 139, M140, M186, 199, Sociology 112, 199
Approved Undergraduate Courses

Ecology and Environment
Community Health Sciences 132, Geography 121, M128, 133, 142, 181, 182A, 182B, 199

Theory and Methods
Anthropology M186, Geography M171

Electives

Latin American Studies Minor

The interdisciplinary program leading to the Latin American Studies minor allows students to choose from a broad range of course offerings in various departments to develop professional and methodological skills with area expertise.

To enter the minor, students must have an overall grade-point average of 2.0 or better and have completed 45 units.

Required Lower Division Courses (8 units): History 8A or 8B or 8C or Latin American Studies 97A, Spanish 25 or Portuguese 25.

Required Upper Division Courses (20 units): Five courses selected from the approved list of Latin American studies courses in at least two of the following fields: (1) arts and humanities (art history, ethnomusicology, folklore, Spanish and Portuguese), (2) ecology and environment (geography, public health), (3) social sciences (anthropology, economics, history, political science, sociology). If the social sciences field is selected, at least two courses must be taken in that field. No more than 4 units of course 199 may be applied toward the minor, and at least three upper division courses (12 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.

Study in Latin America

Latin American Studies majors and minors are highly encouraged to study abroad in Latin America. Students can travel to Latin America through a variety of programs with various lengths (summer or during the academic year). More information about travel abroad programs is available through the UCLA International Education Office, B300 Murphy Hall, (310) 825-4995, ieo@international.ucla.edu. See http://www.ieo.ucla.edu.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://www.gdnet.ucla.edu/gasaa/library/pgmqrintro.htm. 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 (M.A.) degree in Latin American Studies.


Latin American Studies

Lower Division Course

97A. Introduction to Latin America. (4) Lecture, three hours. Interdisciplinary freshman/sophomore survey course designed as introduction to modern Latin America. P/NP or letter grading.

Upper Division Courses

191. Variable Topics Research Seminars: Latin American Studies. (4) Seminar, four hours. Advanced interdisciplinary research seminars for juniors/seniors. Reading, discussion, and development of culminating project. May be repeated for credit with topic change. P/NP or letter grading.

199. Special Studies in Latin American Studies. (4 or 8) Tutorial, to be arranged. Limited to juniors/seniors. Intensive directed research program in which students conduct interdisciplinary research or complete internship with international agency or program dealing with Latin America. Faculty sponsorship and written reports required. May be repeated for credit. P/NP or letter grading.

Graduate Courses

M200. Latin American Research Resources. (4) (Same as History M265 and Information Studies M225.) Seminar, three hours. General and specialized materials in fields concerned with Latin American studies. Library research techniques provide experience and competency required for future bibliographic and research sophistication as basis for enhanced research results.

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.)

M250A. Indians of South America. (4) (Same as Anthropology M272.) Lecture, three hours. Survey of literature and research topics related to Indian cultures of South America. May be repeated for credit.

250B. Interdisciplinary Seminar: Latin American Studies. (4) Seminar, three hours. Problem-oriented seminar on critical areas stressed in University's cooperative 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.

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 M264 and Community Health Sciences M284.) Lecture, three hours. Recommended preparation: Community Health Sciences 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. Exploration of art, music, and ritual and case examples of religion and healing practices via lecture, film, and audioclip. 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.

501. Cooperative Program. (2 to 8) Preparation: consent of UCLA graduate advisor and graduate dean, and host campus instructor, department chair, and graduate dean. Use to record enrollment of UCLA students in courses taken under cooperative arrangements with USC. S/U grading.

506. 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.

507. Preparation for A.M. Comprehensive Examination. (4) Tutorial, to be arranged. Ordinarily taken only during term in which student is being examined. S/U grading.

508. Research for and Preparation of M.A. Thesis. (4) Tutorial, to be arranged. Only 4 units may be applied toward minimum graduate course requirement. S/U grading.

Daniel J. Bussel, J.D.
Devon W. Carbado, J.D.
Ann E. Carrison, J.D. (Shirley Shapiro Endowed Professor of Environmental Law)
Kimberle W. Crenshaw, J.D., LL.M.
Scott L. Cummings, J.D.
John M. de Figueiredo, M.Sc., Ph.D.
Joshua Dienstag, M.A., J.D.
David H. Dolinko, J.D., Ph.D.
Sharon Dolovich, Ph.D., J.D.
Ingrid Ealgi, J.D., Acting
Stephen A. Gardbaum, C.P.E., M.Sc., M.Phil., J.D., Ph.D. (MacArthur Foundation Professor of International Justice and Human Rights)
Carole E. Goldberg, J.D. (Jonathan D. Varat Endowed Professor of Law)
Robert D. Goldstein, M.Ed., J.D.
Mark Grady, J.D.
Mark D. Greenberg, J.D., DPhil.
Cheryl I. Harris, J.D. (Rosalinde and Arthur Gilbert Foundation Endowed Professor of Civil Rights and Civil Liberties)
Barbara Herman, M.A., Ph.D.
Allison Hoffman, J.D., Acting
Jerry Kang, J.D. (Korea Times-Hankook Ibo Professor of Korean American Studies)
Sung Hui Kim, M.A., J.D., Acting
Kenneth N. Klee, J.D.
Russell Korobkin, J.D.
Naomi R. Lamoreaux, M.A., Ph.D.
Maximo Langer, LL.B., S.J.D.
Douglas G. Lichtman, J.D.
Christine A. Littleton, J.D.
Gerald P. Lopez, J.D.
Lynn M. LoPucki, J.D., LL.M. (Security Pacific Bank Professor)
Timothy Malloy, J.D.
Jon D. Michaels, M.A., J.D., Acting
Jennifer L. Mnookin, J.D., Ph.D.
Albert J. Moore, J.D.
Rachel F. Moran, J.D. (Connel Professor of Law)
Hirotso Motomura, J.D. (Susan Westerberg Prager Endowed Professor of Law)
Stephen R. Munzer, J.D.
Neil W. Netanel, J.D., S.J.D. (Pete Kameron Endowed Professor of Law)
Mary D. Nichols, J.D., in Residence
Frances E. Olsen, J.D., S.J.D.
Gary A. Orfield, M.A., Ph.D.
Kai Raustiala, Ph.D., J.D.
Angela Riley, J.D.
Russell K. Robinson, J.D.
Richard H. Sander, M.A., J.D., Ph.D.
Myra K. Saunders, M.L.S., J.D., in Residence
Joanna C. Schwartz, J.D., Acting
Seana Shriftfin, D.Phil., J.D. (Pete Kameron Professor of Law and Social Justice)
Clyde S. Spillenger, J.D., M.A., M.Phil.
Kirk J. Stark, J.D.
Richard H. Steinberg, J.D., Ph.D.
Katherine Stone, J.D. (Arjay and Frances Fearing Miller Professor of Law)
Lynn A. Stout, M.P.A., J.D. (Paul Hastings Endowed Professor of Corporate and Securities Law)
Jonathan D. Varat, J.D.
Eugene Volokh, J.D. (Gary T. Schwartz Endowed Professor of Law)
Adam D. Winkler, M.A., J.D.
Stephen C. Yezell, J.D. (David G. and Dallas P. Price Professor of Law)
Jonathan M. Zaslow, M.A., M.Phil., J.D., Ph.D.
Noah D. Zatz, M.A., J.D.
Eric M. Zolt, M.B.A., J.D. (Michael H. Schill Endowed Professor of Law)

Professors Emeriti
Richard L. Abel, LL.B., Ph.D., LL.D. (Connel Professor Emeritus of Law)
Norman Abrams, J.D.
Allison G. Anderson, J.D.
Michael R. Asimow, J.D.
Paul B. Bergman, J.D.
David A. Binder, LL.B.
Susan Fletcher French, J.D.
Kenneth W. Graham, Jr., J.D.
Joel F. Handler, J.D. (Richard C. Maxwell Professor Emeritus of Law)
Edgar A. Jones, Jr., LL.B.
Robert L. Jordan, LL.B.
Kenneth L. Karst, LL.B. (David G and Dallas P. Price Professor Emeritus of Law)
William A. Klein, LL.B. (Richard C. Maxwell Professor Emeritus of Law)
Leon Lehtim, Ph.B., LL.B., LL.M.
Daniel H. Lorestein, LL.B.
Richard C. Maxwell, LL.B. (Connel Professor Emeritus of Law)
Henry W. McGee, Jr., J.D., LL.M.
William M. McGewen, Jr., LL.B.
Herbert Morris, LL.B., D.P.H.
Grant S. Nelson, J.D.
Susan Westerberg Prager, M.A., J.D. (Arjay and Frances Fearing Miller Professor Emerita of Law)
Samuel C. Thompson, M.A., J.D., LL.M.
Philip R. Trimble, M.A., LL.B.
William D. Warren, J.D., S.J.D. (Connel Professor Emeritus of Law)

Lecturers
Julie B. Cramer, J.D.
Steven K. Derian, M.A., J.D.
Skye Donald, M.A., J.D.
Susan Cordell Gillig, M.A., J.D.
Patrick D. Goodman, M.Ed., J.D.
Thomas W. Hohn, J.D.
Sarah Ann Korobkin, J.D.
Jason A. Light, J.D.
Kerry A. Lyon-Grossman, J.D.
Jyoti Nanda, J.D.
Ezra Ross, J.D.
Paul Wonsowicz, J.D.

Adjunct Professor
Robert Bradley Sears, J.D.

Adjunct Assistant Professor
David Babbe, J.D.

Academic Administrators
Sean B. Hecht, J.D.
Cara Horowitz, J.D.
David Kaye, J.D.
Saúl Sarabia, J.D.
Lara Stempel, J.D.

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 five specific areas of law: business law and policy; critical race studies; entertainment and media law and policy; law and philosophy; and public interest law and policy.

The school offers a three-year curriculum leading to the J.D. degree and two advanced degrees — Master of Laws (LL.M.) and Doctor of Juridical Science (S.J.D.).

Professional Study
The School of Law offers the Juris Doctor (J.D.), Doctor of Juridical Science (S.J.D.), and Master of Laws (LL.M.) 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 http://www.law.ucla.edu/home/.

Law, Undergraduate

Upper Division Courses

156. American Political Thought Seminar. (3) Seminar, nine hours. Examination of American political thought from founding to writings of Abraham Lincoln. Readings include Locke’s Second Treatise of Government, Federalist Papers, and writings of Thomas Jefferson, James Madison, and Alexander Hamilton. Seminar, 13 hours. Examination of consumer bankruptcy policy with one architect of 1978 Bankruptcy Code. Discussion of debt payment in ancient Babylon where spouses and siblings could be sold into slavery for 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 debt and when property debtors should keep, and how debtors can put together repayment plans. P/NP or letter grading.

163A. International Human Rights Colloquium. (3) Formerly numbered 163.) 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 as how law applies to various business entities, duties and liabilities of corporate officers and directors, and shareholder derivative suits. American legal system and constitutional provisions. Topics include introduction to case analysis, reading cases, examining precedent and stare decisis, separation of powers, and statutory interpretation. P/NP or 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.

184. Introduction to Legal Education. (4) Lecture, four hours. Preliminary introduction to legal pedagogy and overview of American legal system. Analysis of appellate and U.S. Supreme Court cases and legislative 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, examining precedent and stare decisis, separation of powers, and statutory interpretation. P/NP or letter grading.

185. Corporate Mock Trial. (4) Lecture, four hours. Preliminary 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 constitutional provisions. Topics include introduction to case analysis, reading cases, examining precedent and stare decisis, separation of powers, and statutory interpretation. 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 scholars in fields of legal history, economics, and political science. Preparation of critiques and discussion of issues in seminar setting with author of papers. 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 alternative theoretical approaches (including realism, institutionalism, and constructivism) to understand relationship between international law and American foreign policy. Reading of scholarly papers prepared by school faculty members and other scholars in fields of legal history, economics, and political science. Preparation of critiques and discussion of issues in seminar setting with author of papers. P/NP or letter grading.

187C. Politics and International Law Colloquium. (6) Seminar, two hours. Corequisite: course 193. Limited to College Honors students. Lectures on alternative theoretical approaches (including realism, institutionalism, and constructivism) to understand relationship between international law and American foreign policy. Reading of scholarly papers prepared by school faculty members and other scholars in fields of legal history, economics, and political science. Preparation of critiques and discussion of issues in seminar setting with author of papers. P/NP or letter 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. Culuminating scholarly paper required. May be repeated for credit. Individual contract required. P/NP or letter grading.

Scope and Objectives

Although lesbian, gay, bisexual, and transgen- der studies has only recently found a place in university curricula, the field actually represents the intersection of two traditions that have existed for thousands of years. The better known is the learned tradition, which, at least since the end of the ancient world, has been overwhelming- ly hostile. Medieval theology condemned the sodomite, nineteenth-century medicine pathol- ogized the invert, and until very recently psychi- atrists felt called on to “cure” the homosexual. For at least as long, however, women and men attracted to others of their own sex have kept alive another affirmative tradition, a knowledge of their past that sustained them, often in the face of overwhelming official hostility. The guests at Plato’s Symposium looked back to Achilles and Patroclus; women-loving-women in early twentieth-century Paris remembered Sappho.

After the birth of the modern gay liberation movement in 1969, this underground knowl- edge came out of the closet and found a public
voice sufficiently strong to mount a sustained challenge to the official teachings concerning minority sexualities and genders. This challenge led to a dramatic increase in research on same-sex desire and cross-gender phenomena, most of it the work of scholars without academic affiliations. Inspired by these accomplishments, students and faculty at colleges and universities eventually mustered the courage to address similar topics, thereby transforming — partly by assimilation, partly by contestation — the previously hostile learned tradition. This originally rather disparate work gradually coalesced into lesbian, gay, bisexual, and transgender studies, which, over the last 20 years, has developed into an academic discipline of remarkable breadth and vitality. The field embraces work in genetics and cultural studies, literature and anthropology, the health sciences, history, and the visual arts. It ranges from archival research to the elaboration of queer theory, from the analysis of constitutional law to questions of public health, from the study of identical twins to the study of popular culture.

Although the initial focus in lesbian, gay, bisexual, and transgender studies is usually on minority sexualities and genders, it is impossible to study them in any meaningful way without raising questions about sexuality and gender in general. And those questions cannot be responsibly answered without considering class, race, ethnicity, history, political economy, and the construction of scientific knowledge. Thus lesbian, gay, bisexual, and transgender studies, which may at first seem to concern the private practices of a small number of people, inevitably lead to the much larger study of sexuality, gender, and culture. It represents an important vantage point from which to investigate the social construction of gender and 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, and transgender studies is the site of some of the most exciting work being done today on the relation of culture, gender, and sexuality.

UCLA’s minor in Lesbian, Gay, Bisexual, and Transgender Studies provides the opportunity to study sexuality from a variety of interdisciplinary perspectives. Interdisciplinarity is assured by requiring students to take at least one course in each of the life sciences, social sciences, and humanities. In addition, seniors in the minor are expected to do an internship in a specialized area of the most exciting work being done today on the relation of culture, gender, and sexuality.

Undergraduate Study

Lesbian, Gay, Bisexual, and Transgender Studies Minor

To enter the Lesbian, Gay, Bisexual, and Transgender Studies minor, students must have an overall grade-point average of 2.0 or better.

Required Upper Division Courses (32 units)

Lesbian, Gay, Bisexual, and Transgender Studies M114, 195, and six additional courses, including at least one each in the humanities, life sciences, and social sciences, to be selected from the approved list of courses available in the program office each term. Students may petition to apply a related course not on the list toward the six-course requirement if they can show that lesbian, gay, bisexual, or transgender issues represent a significant part of the course content. Students are strongly urged to keep in close contact with advisers in the program office who can help them plan their course of study.

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.

Lesbian, Gay, Bisexual, and Transgender Studies Upper Division Courses

M101A. Premodern Queer Literatures and Cultures. (B.) (Not as course as M101A prior to Fall Quarter 2011.) (Same as English M101A and Women's Studies M105A) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Survey of discrete period of queer literature from antiquity 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) (Formerly numbered M101A.) (Same as English M101B and Women's Studies M105B.) 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, 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) (Formerly numbered M101B.) (Same as English M101C and Women's Studies M105C) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Examination of cultural production, specifically literature, produced 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. Readings and films by such authors as Andrew Holleran, Leslie Feinberg, Achy Obejas, Essex Hemphill, Audre Lorde, Cheryl Dume, 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) (Formerly numbered M101D.) (Same as English M101D and Women's Studies M105D) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Variable specializations in queer studies 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 Women's Studies M107B) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. 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.

M114. Introduction to Lesbian, Gay, Bisexual, and Transgender Studies. (5) (Same as Women's Studies M114) Lecture, three hours; discussion, one hour. Introduction to study of sexual and gender diversity of the world in the present and should have an enhanced understanding and appreciation both of the sexual and gender diversity of the world in which they live and of the complex ways in which sexuality and gender interact with other categories of identity and practice.
20th century, with focus on lesbians, gay men, and members of other sexual minorities as creators, performers, and critics. Enforced requisites: English M147A. Psychology of Lesbian Experience. (4) (Same as Psychology M147A and Women’s Studies M147A.) Lecture, two hours; discussion, one hour. Requisite: course M114 or Psychology 10 or Women’s Studies 10. Designed for juniors/seniors. Review of research and theory in psychology and women’s studies to examine various aspects of lesbian experience, impact of heterosexism/stigma, gender role socialization, minority status of women and lesbians, identity development within a multicultural society, changes in psychological theories about lesbians in sociohistorical context. P/NP or letter grading.

150. Speaking Out: Public Speaking on Lesbian, Gay, Bisexual, and Transgender Issues. (1) Discussion, two hours. Interdisciplinary course designed to teach leadership and public speaking skills on lesbian, gay, bisexual, and transgender issues. Sexual identity development, personal growth, and lesbian, gay, bisexual, and transgender history intersect with public speaking and leadership skills. Topics include sexual identities, family, leadership, and public speaking performance. P/NP or letter grading.

M167. Contested Sexualities. (4) (Same as Women’s Studies M167.) Lecture, three hours; discussion, one hour. One-hour discussion and seminar. Enforced requisites: Composition 3 or 3H. Consult Schedule of Classes for the core curriculum and for instructors. May be repeated for credit with instructor consent. P/NP or letter grading.

187. Selected Topics in Lesbian, Gay, Bisexual, and Transgender Studies. (4) Lecture, four hours; discussion, three hours. Study of selected topics in gay, lesbian, bisexual, and transgender issues. Sexual identity development, personal growth, and lesbian, gay, bisexual, and transgender history intersect with public speaking and leadership skills. Topics include sexual identities, family, leadership, and public speaking performance. P/NP or letter grading.

LIFE SCIENCES

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Frank A. Laski, Ph.D., Chair

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, Cellular, and Developmental Biology (Molecular, Cellular, and Developmental Biology Department), Neuroscience (Neuroscience Interdepartmental Program), Physiological Science (Integrative Biology and Physiology Department), and 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 evolution and biodiversity, cellular and organismal biology, 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 department listings in this section of the catalog. For additional information on the life sciences core curriculum, see http://www.lscore.ucla.edu.

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 advising offices and receive important curricular information on each major. 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: Life Sciences 1, 2, 3, 4, 23L; Chemistry and Biochemistry 14A, 14B, 14BL, 14C, 14CL, and 14D, or 20A, 20B, 20L, 30A, 30AL, 30B, and 30BL; Mathematics 3A, 3B, and 3C, or 31A, 31B, and 32A; Physics 1A, 1B, 1C, 4AL, and 4BL, or 6A, 6B, and 6C.

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 replications 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, one year of calculus, one year of general chemistry with laboratory for majors, and one semester of organic chemistry with laboratory. 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 at http://www.admissions.ucla.edu/prospect/adm_tr.htm 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 leading scientists in transmitting the excitement and values of scientific research to undergraduate education. The goal of the URCGF 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 URCGF 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 — Life Sciences 10H — which is limited to 30 students per term and is offered every term. After satisfactorily completing course 10H and with instructor consent, stu-
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 their evolution, ecological, and physiological relationships. P/NP or letter grading.

2. Cells, Tissues, and Organs. (4) Lecture, three hours; discussion, 75 minutes. Enforced requisite: course 2 or 3. Corequisites: course 23L (students must take 23L concurrently with course 3 if they do not plan to take course 4). Introduction to the 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. Enforced requisites: course 2, and Chemistry 14C or 30A. Corequisite: course 23L (students must take 23L concurrently with course 3 if they do not plan to take course 4). Introduction to the basic principles of biochemistry and molecular biology. Letter grading.

4. Introduction to Molecular Biology (Honors). (5) Lecture, two and one-half hours; discussion, 90 minutes; movie section, two and one-half hours. Enforced requisites: course 2, and Chemistry 14C or 30A. Honors course parallel to course 3, but at a more advanced level. Letter grading.

5. Genetics. (5) Lecture, three hours; discussion, 75 minutes; movie section, two and one-half hours. Corequisites: Chemistry 14A (or 20A), 14C (or 30A). Enforced corequisite: course 23L. Principles of Mendelian inheritance and chromosomal basis of heredity in prokaryotes and eukaryotes, recombination, biochemical genetics, mutations, DNA, genetic code, gene regulation, genes in populations. Letter grading.


10H. Research Training in Genes, Genetics, and Genomics. (6) Lecture, 90 minutes; laboratory, six hours; computer laboratory, 90 minutes. Enrolled to 200 students. Basic training in biological research, including techniques in genetics, model organism, bioinformatics, functional genomics, electron microscopy. Part of Undergraduate Research Consortium in Functional Genomics sponsored by Howard Hughes Medical Institute Professors Program. 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 grading.

23L. Introduction to Laboratory and Scientific Methodology. (2) Laboratory, three hours; discussion, one hour. Enforced requisite: course 2. Must be taken concurrently with either course 3 or 4. 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.

71SL. Classroom Practices in Elementary School Science (Small Seminar) 100HA. Seminar, 90 minutes; lab work on three days a week for three hours. Introduction for prospective science teachers to high school science. Pairs of students are placed in local high 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.

72SL. Classroom Practices in Middle School Science. (2) Seminar, 90 minutes; fieldwork, three hours. Enforced requisite: course 71SL. Introduction for prospective science teachers to middle school science. 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 science, cognitive development of students at this level, and best means to teach appropriate science concepts at this level. P/NP grading.

73SL. High School Science. (2) Seminar, 90 minutes; service learning fieldwork, three hours. Enforced requisite: courses 71SL and 72SL. Introduction for prospective science teachers to high school science. 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 science, cognitive development of students at this level, and best means to teach appropriate science concepts at this level. P/NP grading.

97. Variable Topics in Life Sciences. (1 to 4) Seminar, one hour. Preparation: enrollment in Life Sciences laboratory designed for undergraduate students. Topics 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.

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.

192A. Undergraduate Practicum in Life Sciences. (4) Seminar, two hours. Requisite: course 2 or 3. Limit- ed to sophomores/juniors/seniors. Training and supervised practicum for advanced undergraduate students in courses related to life science. Light microscopes, 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.

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.

LINGUISTICS

College of Letters and Science

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Russell G. Schuh, Ph.D.
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. 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 Ph.D. degrees.

Undergraduate Study

The majors described below are of two types: (1) a major that concentrates entirely on general linguistics and (2) several majors that combine the basic courses of the general program with a language concentration or other related fields. 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 B.A.

The Linguistics major is designed for students with an exceptional interest in and aptitude for the study of languages and linguistics. It enables undergraduates to gain substantial familiarity with several languages and types of linguistic structure and to become conversant with the historical study of language and formal theories of linguistics.

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 requisite to that one (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 at http://www.admissions.ucla.edu/prospect/adm_tr.htm for up-to-date information regarding transfer selection for admission.

The Major

Required: Eleven upper division courses as follows: Linguistics 103, 110, 120A, 120B or 127; two courses from 114, 120C, 170; Anthropology M140 and either C144 or M145; one course from Anthropology 141, 142A, 143, or Sociology M124A; and two upper division electives from Anthropology 141, 142A, 143, C144, M145, the 130 series (one course only), the 170 series (one course only), Sociology M124A, M124B. 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.

Linguistics and Anthropology B.A.

Preparation for the Major

Required: Completion of the equivalent 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 at http://www.admissions.ucla.edu/prospect/adm_tr.htm for up-to-date information regarding transfer selection for admission.

The Major


Linguistics and Computer Science B.A.

Preparation for the Major

Required: Linguistics 20, Computer Science 31, 32, 33, 35L, Mathematics 31A, 31B, 61 or 180, Philosophy 31, completion of the sixth term in one foreign language or the third term in each of two foreign languages.

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 at http://www.admissions.ucla.edu/prospect/adm_tr.htm for up-to-date information regarding transfer selection for admission.

The Major

Required: Eleven upper division courses as follows: Linguistics 103, 120A, 120B, 120C, 165A or 165B, 180, 185A, Computer Science 131, 132, 161, 181.

Linguistics and English B.A.

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 at http://www.admissions.ucla.edu/prospect/adm_tr.htm for up-to-date information regarding transfer selection for admission.

Linguistics and French B.A.

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 at http://www.admissions.ucla.edu/prospect/adm_tr.htm for up-to-date information regarding transfer selection for admission.

Linguistics and Philosophy B.A.

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.
Transfer selection for admission. Refer to the UCLA Transfer Admission Guide at http://www.admissions.ucla.edu/prospect/adm_tr.htm 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 103, 120A, 120B, 130, 132, and one upper division elective in linguistics (multiple-listed courses may not be applied). Linguistics C135 or 165A or 165B (or 200A or 200B with a grade of A in 120A or 120B respectively and consent of instructor) is 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

B.A.

Preparation for the Major

Required: Linguistics 20, Scandinavian 1, 2, 3, 4, and 5, or 11, 12, 13, 14, and 15, or 21, 22, 23, 24, and 25, 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 at http://www.admissions.ucla.edu/prospect/adm_tr.htm 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), one upper division elective in linguistics, two courses from Scandinavian 105, 106, 107 (or one of these courses twice), 197 (in a topic related to Scandinavian linguistics, under the direction of a Scandinavian or Linguistics faculty member), and three upper division electives in Scandinavian.

Linguistics and Spanish B.A.

Preparation for the Major

Required: Linguistics 20, Spanish 1, 2, 3, 4, 5, 25 or 27, 42, 44, completion of the equivalent of the third term of a second foreign language.

Transfer Students

Transfer applicants to the Linguistics and Spanish 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 Spanish, one Spanish composition course, one Spanish civilization course, one Spanish American civilization course, one introductory to linguistics course, and one year of a second foreign language.

Refer to the UCLA Transfer Admission Guide at http://www.admissions.ucla.edu/prospect/adm_tr.htm 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), one additional upper division course in linguistics, Spanish 100A, 100B, M118A (or 160), 119, and two additional upper division Spanish courses.

Honors Program

Honors in linguistics 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 189A 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 linguistics 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 180, 185A, Mathematics 61. Students graduate with a bachelor’s degree in their major and a specialization in Computing.

Linguistics Minor

The Linguistics minor is designed for students where training in linguistic 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 degree programs 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 103, 120A, 120B, two elective courses selected from 104 through 165B, and an additional elective linguistics course, which may be upper or lower division.

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, http://www.gdnet.ucla.edu/gasaa/library/pgmrqintro.htm. 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 (M.A.), Candidate in Philosophy (C.Phil.), and Doctor of Philosophy (Ph.D.) degrees in Linguistics.

Indigenous Languages of the Americas

Lower Division Courses


17. Intensive Elementary Quechua. (12) Formerly numbered Quechua 17. 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) Formerly numbered Quechua 18A-18B-18C. 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) Formerly numbered Quechua 119A-119B-119C. 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) Formerly numbered Quechua 191. 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) Formerly numbered Quechua 596. Tutorial, to be arranged. Requisites: courses 119A, 119B, 119C. Directed individual study or research in Quechua. Four units may be applied toward M.A. course requirements. May be repeated for credit. S/U 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 universality, and its diversity; language in its...
social and cultural setting; language in relation to other aspects of human inquiry and knowledge. P/NP or letter grading.

2. Language in the U.S. (5) Lecture, four hours; discussion, one hour. Survey of languages of the U.S. (American Indian languages, oldest immigrant languages, ethnic and regional varieties of English, and newest arrival languages) and social and political aspects of American language use. P/NP or letter grading.


4. Language and Evolution. (5) Lecture, four hours; discussion, one hour. Basic concepts and tools of evolutionary theory and linguistics relevant to how organisms with linguistic abilities evolved, and how particular languages, as cultural artifacts, survive and change socially.

5. World Languages. (5) Lecture, four hours; discussion, one hour. Introduction to linguistic diversity of world and to such core areas of linguistics as study of sound production (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, unrelated languages, language contact, and language endangerment, together with related sociopolitical issues. P/NP or letter grading.

6. Out of Mouths 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 perception and production 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.

M10. Structural Linguistics. (5) Same as English M40.) Lecture, four hours; discussion, one hour. Introduction to structure of English words of classical origin, including most common base forms and rules by which alternate forms are derived. Students may expect to achieve substantial enrichment of their vocabulary while learning about etymology, semantic change, and abstract rules of English word formation. P/NP or letter grading.


88A-88B. Lower Division Seminars. (4-4) Seminar, three hours. Limited to freshmen/sophomores. Variable topics; consult Schedule of Classes. College of Letters and Science, or department for topics to be offered in specific term. May be repeated for credit. P/NP or letter grading.

97. Variable Topics in Linguistics. (1 to 4) Seminar, three hours; fieldwork, two hours. Variable topics offered by departmental faculty members. May be repeated for credit with topic change. P/NP or letter grading.

Upper Division Courses

103. Introduction to General Phonetics. (5) Lecture, four hours; discussion, one hour. Enforced requisite: course 20 with grade of B– or better. Phonetics of variety of languages and phonetic phenomena that occur in languages of the world. Extensive practice in perception and production of such phenomena. P/NP or letter grading.


105. Morphology. (5) Lecture, four hours; discussion, one hour. Requisite: course 104. In linguistics, morphology is study of word structure. Morphological theory seeks to answer questions such as how should words and their component parts (roots, prefixes, suffixes, vowel changes) be classified crosslinguistically? how do speakers store, produce, and process complex words (with affixes, compounds)? how do speakers know how to produce correct word forms even when they have not previously heard them? how do speakers know that particular words are well-formed or ill-formed? is there principled distinction in traditional division between inflection and derivation? how can we best account for variation in forms that are same (e.g., root in keep/kept even though vowels are different)? can we formulate crosslinguistic generalizations about word structure? P/NP or letter grading.

110. Introduction to Historical Linguistics. (5) Lecture, four hours; discussion, one hour. Requisites: courses 20, 103, 120A or 120B. Methods and theories appropriate to historical study of language, such as comparative method and reconstruction. Sound change, grammatical change, semantic change. P/NP or letter grading.

111. Intonation. (4) Lecture, two hours; laboratory, two hours. Requisites: courses 20, 103, 120A or 120B. Recommended: course 104 or 204A. Survey of intonational theory for English and other languages, with particular emphasis on phonological models of intonation. Laboratory equipment used for recording and analyzing intonation and studying the intonation systems of some languages. P/NP or letter grading.

114. American Indian Linguistics. (5) Lecture, four hours; discussion, one hour. Strongly recommended preparation: course 20. Survey of genetic areal, and typological classifications of American Indian languages; writing systems for American Indian languages; American Indian languages in social and historical context. One or more languages may be investigated in detail. P/NP or letter grading.

M115. Survey of African Languages. (4) (Same as African Languages M187.) Lecture, four hours. Requisites: courses 20 and 103A or 103B. Study of the distribution and classification of African languages and their phonological and grammatical structures; elementary practice in several languages. P/NP or letter grading.


120A. Phonology I. (5) Lecture, four hours; discussion, one hour. Requisites: courses 20, 103. Introduction to phonological theory of words, underlying forms, derivations, justification of phonological analyses. Emphasis on practical skills with problem sets. P/NP or letter grading.

120B. Syntax I. (5) Lecture, four hours; discussion, one hour. Requisite: course 120A with grade of B– or better. Course 120A is not requisite to 120B. Descriptive analysis of morphological and syntactic structures in natural languages; emphasis on insight into nature of such structures rather than linguistics formalization. P/NP or letter grading.

120C. Semantics I. (5) Formerly numbered 125.) Lecture, four hours; discussion, one hour. Requisite: course 120B. Survey of most important theoretical and descriptive claims about nature of meaning. P/NP or letter grading.

127. Syntactic Typology and Universals. (5) Lecture, four hours; discussion, one hour. Requisite: concurrent enrollment. Study of essential similarities and differences among languages in grammatical devices they use to signal the following kinds of concepts: relations between nouns and verbs (case and word order), negation, comparison, existence, possession, causation, interrogation, reflexivization, relativization, attribution (adjectives), time (tense and aspect), and backgrounding (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 requisite: concurrent enrollment with course C128A. C128A and C128B. Structure of French language, with emphasis on properties of construction not found in English. Concurrently scheduled with course C128A-C128B. P/NP or letter grading.

130. Language Development. (5) Lecture, four hours; discussion, one hour. Requisites: courses 20, 120A, 120B. Survey of research and theoretical perspectives on language acquisition. Focus on children’s initial learning of language and development of phonology, morphology, syntax, and word meaning. P/NP or letter grading.

132. Language Processing. (5) Lecture, four hours; laboratory, one hour. Requisites: courses 103, 120A, 120B. Central issues in language comprehension and production, with emphasis on how theories in linguistics inform processing models. Topics include word understanding (with emphasis on spoken language), parsing, and error modalities of sentence production, and computation of syntactic structure during production. P/NP or letter grading.

C135. Neurolinguistics. (5) Lecture, four hours; discussion, one hour. Requisites: courses 20, 120A, 120B, 130. Examination of relationship between brain, language, and linguistic theory, with evidence presented from atypical language development and language disorders in the mature brain. Topics include methodologies 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 Acquisition. (5) Lecture, four hours; discussion, one hour. Requisites: courses 20, 120A, 120B. Course for graduate and advanced undergraduate students. Study of childhood bilingualism and adult and child second language (L2) acquisition, with focus on understanding nature of L2 grammar and grammatical processes underlying L2/bilingual acquisition. Discussion of neurolinguistic and social aspects of bilingualism. Concurrently scheduled with course C244. P/NP or letter grading.

M146. Language in Culture. (5) (Same as Anthropology M140.) Lecture, three hours; discussion, one hour; fieldwork, two hours. Requisite: course 20 or Anthropology 33. Study of language as aspect of culture; relations of language and culture 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 sociolinguistic contexts; nature of European proto-language and proto-culture. One or more Indo-European languages may be investigated in detail. P/NP or letter grading.
160. Field Methods. (5) Seminar, four hours; individu- al or group sessions, one to two hours. Requisites: courses 103A, 103B. Analysis of language un- known to members of class from data elicited from na- tive speaker of that language. P/NP or letter grading.

165A. Phonology II. (5) Lecture, four hours; discus- sion, one hour. Requisite: course 120A. To be taken in term following completion of course 120A or as soon as possible thereafter. Further study in phonological theory and analysis: autosegmental theory, syllable structure, metrical theory, interface of phonology and grammar. P/NP or letter grading.

165B. Syntax II. (5) Lecture, four hours; discussion, one hour. 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; discus- sion, one hour. Requisite: course 120C. Recommend- ed for students who plan to do graduate work in lin- guistics. Further study in relevant logics, relations be- tween sentences, lexical semantics, tense and aspect, adverbs, modality and intensification. P/NP or letter grading.

170. Language and Society: Introduction to Socio- linguistics. (4) (R) fulfills 20-20 course. Study of pat- terned covariation of language and society; social dia- lects and social styles in language; problems of multi- lingual societies.

175. Linguistic Change in English. (5) Lecture, four hours. Requisites: courses 110D, 120A, 120B. Princi- ples of linguistic change as exemplified through de- tailed study of history of English pronunciation, lexicon, and syntax. P/NP or letter grading.

M175A. Japanese Phonology and Morphology. (4) (Same as Japanese CM122.) Lecture, three hours; discussion, one hour. Recommended preparation: two or more years of Japanese. Survey of Japanese phon- etics, phonology, and morphology. Letter grading.


185A. Computational Linguistics I. (5) Lecture, four hours; laboratory, one hour. Requisites: courses 120B, 180, Program in Computing 10B (or Computer Science 32). For students who wish to pursue research of recent work on natural language processing, including basic syntactic parsing strategies, with brief glimpses of semantic representation, reasoning, and response generation. 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 syn- tactic and semantic representation, participation of English speakers, attention to their linguistic sophistication and psycho- logical plausibility. P/NP or letter grading.

191A. Variable Topics Research Seminars: Lin- guistics. (2 or 4) Seminar, three 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.

191B. Variable Topics Research Seminars: Lin- guistics. (2 or 4) Seminar, three 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 Linguis- tics. (4-2) Seminar, seven hours (course 192A) and six hours (course 192B). Limited to juniors/seniors. Participation of faculty mentor, master’s level un- dergraduate students to assist in linguistics courses. Students assist in preparation of materials and devel- opment of innovative programs under guidance of facul- ty mentors and teaching assistants. May not be ap- plied toward course requirements for any Linguistics Department major. Individual contract required. Infor- mation and contracts may be obtained from Linguistics Department. P/NP or letter grading.

197. Individual Studies in Linguistics. (2 to 4) Tuto- rial, four hours. Requisite: course 1 or 20. Limited to ju- niors/seniors. Individual intensive study, with 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 credit. Individual contract required. P/NP or letter grading.

198A. Honors Research in Linguistics I. (4) Tutori- al, to be arranged. Preparation: 3.5 grade-point aver- age. Requisite or corequisite: course 165A (or 200A) or 165B (or 200B). Recommended: completion of both courses 165A and 165B (or 200A and 200B) before or during term in which course 198A is taken. Limited to juniors/seniors. Development of honors thesis or com- prehensive research project on linguistic topic selected by student and approved by instructor. Fulfillmen- t of mastery of subject matter required. May be repeated for credit. Individual contract required. P/NP or letter grading.

198B. Honors Research in Linguistics II. (2) Tutori- al, to be arranged. Requisite: course 198A. Limited to juniors/seniors. Completion of honors thesis or com- prehensive research project begun in course 198A un- der direct supervision of faculty member. Consult pro- fessor in charge to enroll. May be repeated for credit. Individual contract required. P/NP or letter grading.

199. Directed Research or Senior Project in Lin- guistics. (4) Tutorial, to be arranged. Limited to senior Linguistics majors. Supervised individual research or investigation of linguistic topic selected by student un- der guidance of faculty mentor. Submission of admi- nistering paper re- quired. 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) Preparation: gradu- ate linguistics student or grade of A in course 120A or equivalent course in phonology. Courses 200A and 201 form two-course survey of current research in pho- nology theory. Introduction of phonology with mor- phology and syntax, syllable structure, stress.

200B. Syntactic Theory I. (4) Preparation: graduate linguistics student or grade of A in course 120B or equivalent course in syntax. In-depth introduction to selected topics: representation of un- derlying structure of predicates, arguments, and grammatical re- lations. Topics include levels of representation, X-bar theory, case theory, thematic roles, the lexicon, gram- matical function-changing rules, head-complement re- lations.

200C. Semantic Theory I. (4) Lecture, four hours. Requisite: course C180 or C208. Overview of current results and research methods in linguistic semantics. Topics include generalized quantifiers and semantic universals; predicate-argument structure; binding and prononominalization, formal semantic inter- pretation, syntax and LF, tense, ellipsis, and focus. Let- ter grading.

201A. Phonological Theory II. (4) (Formerly num- bered 201.) Lecture, four hours. Requisite: course 200A. Continuation of course 200A. Second course in two-course survey of current research in phonological theory. Topics include sound changes (tone, tiers, phonological structure), feature theory, underspecification, prosodic morphology, S/U or letter grading.

201B. Syntactic Theory II. (4) (Formerly numbered 206.) Lecture, four hours. Requisite: course 200B. In- depth introduction to selected topics in theory of move- ment processes and topics selected from following ar- eas: WH movimiento and related rules, subjacency and other constraints on movement; ECP and related con- ditions on distribution of empty categories; resumptive pronoun constructions; parametric variation in move- ment constructions; LF WH-movement; filters; recon- struction; parasitic gaps; barriers theory; control theo- ry; null subject parameter. S/U or letter grading.


204A. Experimental Phonetics. (4) (Formerly num- bered 204.) Lecture, three hours. Requisite: course 103. Use of laboratory equipment to investigate articu- latory and acoustic characteristics of speech. S/U or letter grading.

204B. Speech Production. (4) Lecture, three hours; laboratory, one hour. Requisite: course 104 or 204A. Survey of topics in speech production research, es- pecially as related to linguistic phonetics. Topics include physiology of vocal tract and models of speech produc- tion and articulatory/acoustic relations. Emphasis on use of laboratory methods such as acoustic transducers, electromagnetic articulography, static and electropalatogra- phy, electromagnetic articulography, and imaging tech- niques. S/U or letter grading.


209A. Computational Linguistics I. (5) Lecture, four hours; laboratory, one hour. Survey of recent work on natural language processing, including basic syntactic
linguistics, psycholinguistics, etc. May not be applied toward M.A. or Ph.D. degree requirements. Meets with course 258A. Course 201, 202, 203, or 204A may be required. Specialized topics in phonetics and phonology. May be repeated once for credit. S/U grading.

258A. Topics in Phonetics and Phonology II: Proseminar. (2) Seminar, three hours. Requisite: course 256A. Specialized topics in phonetics and phonology. May be repeated once for credit. Letter grading.

258B. Topics in Language Variation II: Proseminar. (2) Seminar, two hours. Requisite: course 257A. Special topics in language variation. May be repeated once for credit. Letter grading.

259A. Topics in Linguistics II: Proseminar. (4) Seminar, four hours. Requisite: course 258A. Individual presentations on topics such as child language, sociolinguistics, neurolinguistics, computational linguistics, psycholinguistics, etc. May be repeated once for credit. Letter grading.

259B. Topics in Linguistics II: Proseminar. (2) Seminar, two hours. Requisite: course 258A. Specialized topics in language variation. May be repeated once for credit. Letter grading.

260A-260B-260C. Seminars: Phonetics. (2 or 4 each) Seminar, three hours. Each course may be taken independently for credit. May not be applied toward M.A. or Ph.D. degree requirements when taken for 2 units. May be repeated for credit. S/U grading.

261A-261B-261C. Seminars: Phonology. (2 or 4 each) Seminar, three hours. Each course may be taken independently for credit. May not be applied toward M.A. or Ph.D. degree requirements when taken for 2 units. May be repeated for credit. S/U grading.

263A-263B-263C. Seminars: Language Variation. (2 or 4 each) Seminar, three hours. Each course may be taken independently for credit. May not be applied toward M.A. or Ph.D. degree requirements when taken for 2 units. May be repeated for credit. S/U grading.

264A-264B-264C. Seminars: Special Topics in Linguistic Theory. (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 M.A. or Ph.D. 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 linguistics. Each course may be taken independently for credit. May not be applied toward M.A. or Ph.D. degree requirements when taken for 1 or 4 units. May be repeated for credit. S/U grading.


303. Computational Phonetics. (2 or 4 each) Extensive practice in production, perception, and transcription of sounds from wide range of languages. Course schedules will vary depending on the specific teaching assistants for 2 units. May be repeated for credit. S/U grading.

411A-411B. Research Orientation. (2-2) Designed for graduate students. Sequence of lectures by department faculty to acquaint new graduate students with research directions and resources of department and elsewhere on campus. May not be applied toward M.A. or Ph.D. degree requirements. S/U grading.

422. Practicum: Phonetic Data Analysis. (3) Designed for graduate students. Workshop in examination of phonetic data, such as sound spectrograms, oscillographic records, and computer output. May not be applied toward M.A. or Ph.D. degree requirements. S/U grading.

444. M.A. Thesis Preparation Seminar. (4) Student presentations, two hours. Student presentations of proposed topics for M.A. theses, with discussion and criticism by other students and faculty. May not be applied toward M.A. or Ph.D. degree requirements. S/U grading.

495. College Teaching of Linguistics. (2) Seminar, to be arranged. Designed for graduate students. Required of all new teaching assistants. Seminars, workshops, and apprentice teaching. Selected topics, including curriculum development, various teaching strategies, and their effects, teaching evaluation, and other topics on college teaching. Students receive unit credit toward full-time equivalence but not toward any degree requirements. 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.

569A. Directed Studies. (1 to 8) Preparation: completion of all undergraduate deficiency courses. Directed individual study or research. May be applied toward M.A. course requirements. May be repeated for credit. S/U grading.

569B. Directed Linguistic Analysis. (1 to 8) Preparation: completion of M.A. degree requirements. Intensive work with native speakers by students individually. May be repeated for credit. S/U grading.

597. Preparation for M.A. Comprehensive and Ph.D. 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 M.A. course requirements. May be repeated for credit. S/U grading.

598. Research for Ph.D. Dissertation. (1 to 16) Preparation: advancement to Ph.D. candidacy. May not be applied toward Ph.D. course requirements. May be repeated for credit. S/U grading.
Subramaniam Ramanarayanan, Ph.D.
Guillaume Y. Roels, Ph.D.
Richard E. Saouma, Ph.D.
Jenessa R. Shapiro, Ph.D.
Suzanne B. Shu, M.Eng., M.B.A., Ph.D.
Jason A. Snyder, Ph.D.
Steven A. Spiller, B.A., Acting
Geoffrey A. Tate, Ph.D.
Miguel M. Unzueta, Ph.D.
Nico Voigtlander, M.Sc., Ph.D.
Liu Yang, Ph.D.
Maia J. Young, Ph.D.
Robert Zeithammer, Ph.D.

Senior Lecturers
Ariella D. Herman, Ph.D.
Robert S. Spich, Ph.D.

Lecturers
Stephen D. Cauley, Ph.D.
Gonzalo Freexes, J.D.
Julie Ann Gardner-Treloar, M.B.A.
Peter Guber, LL.M.
Jane Guerin, J.D.
Gordon L. Klein, J.D.
Danny S. Litt, M.B.A.
David S. Ravetch, M.A.
Eric H. Sussman, M.B.A.

Adjunct Professors
William M. Cockrum, M.B.A.
Jeffrey A. Dubin, Ph.D.
Janis S. Forman, Ph.D.
Robert F. Foster, M.B.A.
George T. Geis, Ph.D.
Peter S. Pao, Ph.D.
James R. Stengel, M.B.A.

Adjunct Associate Professor
Robert M. McCann, Ph.D.

Adjunct Assistant Professors
Anike M. Audenaert, M.A.
Jason C. Hsu, M.Sc., Ph.D.
Andres Terech, Ph.D.

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 an academic (M.S.) and professional (M.B.A.) master’s and a Master of Financial Engineering (M.F.E.), as well as an Executive M.B.A. Program designed for working managers who are moving from specialized areas into general management and a three-year Fully Employed M.B.A. Program for emerging managers. The school also offers a part-time dual Executive M.B.A. degree with the National University of Singapore (NUS) Business School that prepares participants for top positions in organizations around the world. A Ph.D. 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 and several undergraduate courses in management. Enrollment in these courses, although open to all University students who have completed the requisites, is limited. The school limits the number of courses taken by undergraduate students to 11.

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 3.2, (2) complete all required preadmission courses with a minimum course grade-point average of 3.2, and (3) receive grades of B or better in Management 1A and 1B. Repeition 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. For further information, see http://www.anderson.ucla.edu/x25205.xml.

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 1B are not taken at UCLA, students must complete courses 120A and 122.

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.

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 management course must be completed at UCLA with a grade of C 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, http://www.gdnet.ucla.edu/gasaa/library/programintro.htm. 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 (M.S.), Candidate in Philosophy (C.Phil.), and Doctor of Philosophy (Ph.D.) degrees in Management, the Master of Business Administration (M.B.A.) degree, and the Master of Financial Engineering (M.F.E.) degree. The school also offers the Executive M.B.A. Program (EMBA) and the M.B.A. for the Fully Employed (FEMBA).


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 transactions and financial statements. 1B. Students define, prepare, and present their own research projects with guidance of professional school faculty mentor. 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.


M118A. Complexity Science for Social Systems. (4) (Same as Human Complex Systems M130.) Lecture, four hours. Limited to juniors/seniors. Introduction to (1) complexity science as applied to social behavior and (2) agent-based computational modeling. Use of complexity science to bridge old and new conceptions of social science. Newtonian science, neoclassical economics, and old-style approaches to social science all build on assumptions that all basic aspects comprising phenomena (atomic particles, atoms, molecules, organisms, people, groups, firms) are homogeneous and go forward in time under equilibrium conditions interspersed with occasional disequilibrium periods. Letter grading.


122. Management Accounting. (4) Lecture, three hours. Requisite: course 1B. Analysis of summarization of accounting data, trend analysis, and techniques of management decision making. P/NP or letter grading.

123. Auditing. (4) Lecture, three hours. Requisite: course 120B. Specialized auditing concepts and techniques including audit planning, analytical procedures, audit reports; joint-product costing; distribution cost; standard costs; differential cost analysis; profit-volume relationships and break-even analysis. P/NP or letter grading.


126. Financial Statement Analysis. (4) Lecture, four hours. Requisite: course 120B. Comprehensive study of concepts and procedures used to interpret and analyze financial statements. P/NP or letter grading.

127A. Tax Principles and Policy. (4) Lecture, three hours. Requisite: course 120B. Examination of federal 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 120B. 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 requisite: course 127A. Study of two principle areas of international taxation from U.S. regulatory perspective: taxation of American citizens and companies conducting business in international arena (outbound transact.); and taxation of foreign nationals and companies who invest or conduct business in the U.S. (inbound transactions). P/NP or letter grading.

128. Special Topics in Accounting. (4) Lecture, three hours. Requisite: course 120A. Analysis of special topics in public accounting, such as audit and fraud examination, mergers and acquisitions, public-company status and going-public process, role of partner, serving as a refresher course for general accounting students. Discussion of a case study of current interest in accounting profession. P/NP or letter grading.

130A. Basic Managerial Finance. (4) Lecture, three hours. Requisite: course 1B, one statistics course. Study of financial decision making by business firms, 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.

130B. Advanced Managerial Finance. (4) Lecture, three hours. Requisite: course 130A. Analysis of capital budgeting and working capital management. Review of long-term financing through security markets and leasing. Decision-making under uncertainty, including use of cash flow concepts, interest rates, and security-price-making forces; construction of personal investment programs.


150. Elements of Industrial Relations. (4) Prerequisite: 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 price-making forces; construction of personal investment programs.

155. Elements of Real Estate and Urban Land Economics. (4) Examination of the decision making of investors as related to logical forces shaping cities and influencing real estate market functions and land uses. Emphasis on decision making as it relates to appraising, 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) Knowledge and skills leading to effectiveness in interpersonal relations. Understanding oneself as a leader and others as individuals and as members of working groups. Understanding of group process, including group leadership. Lectures and "sensitivty training" laboratory.

195. Community or Corporate Internships in Management. (2 to 4) Tutorial, to be arranged. Limited to juniors/seniors. Internship in a community agency or 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 or letter grading.
Graduate Courses

199. Directed Research in Management. (2 to 8) Tutorial, to be arranged. Limited to juniors/seniors. Supervised individual research or investigation of selected research topics under the guidance of a faculty mentor. Culminating paper or project required. May be repeated for credit. Individual contract required. P/NP or letter grading.


201A. Business Forecasting: Turning Numbers into Knowledge. (4) Discussion, three hours. Prepar- ration: familiarity with linear regression. Examination of one approach to analytical thinking, combining numerical 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.


203A. Economics of Decision. (4) Discussion, three hours. Preparation: basic probability theory. Basics of single-person decision theory and introduction to non-cooperative game theory. Examination in some detail of von Neumann/Morgenstern expected utility theory. Other topics in decision theory include subject ex- pected utility theory and decision rules from expected utility behavior. S/U or letter grading.


206B. Market Power, Mergers, and Antitrust. (4) Lecture, three hours. Requisite: 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 the problems which can arise with emphasis on prac- tice and measurement. S/U or letter grading.


207. Resource Administration of Nonmarket Activ- ities. (4) Seminar, three hours. Requisite: course 405. Examination of behavior of managers in profit vs. not- for-profit sectors to determine critical variables that ex- plain observed differences in behavior. Use of method- ology of microeconomics, particularly utility maximiza- tion.

208. Public Services and Private Functions. (4) Requisites: courses 405, 406. Sources and uses of federal, state, and local revenues and their impact on public and private resource allocation. Examination of proper roles of government in the provision of public goods and services.

209A-209B. Elements of Economic Organization. (1 to 6 each) (Formerly numbered M209.) Same as Law M229. (Lecture, three hours. Preparation: familiarity with basic principles of accounting and valuation. Course M209A is enforced requisite to 209B. Advanced course in business organization and structure of business transactions and allocation of control, risk, and return. Topics include venture capital investments, debt and loan agreements, employment agreements, distribution and marketing agreements (including franchising), motion picture production/finance/distribution agreements, and joint ventures. Assigned reading and focus on documents that incorporate terms of business transactions of deals. In Progress (M209A) and S/U or letter (209B) grading.

210A. Mathematical Programming. (4) Discussion, three hours. Preparation: linear algebra. Comprehen- sive development of major computational meth- ods of linear programming, with applications to a vari- ety of areas. S/U or letter grading.

210B. Applied Stochastic Processes. (4) Discus- sion, three hours. Preparation: probability theory at lev- el of Electrical Engineering 131A or Mathematics 170A or Statistics 100A. Topics include Poisson processes, renewal theory, Markov chains, and Markov decision processes, with emphasis on problem formulation, de- cision making, and characterization of optimal policies. Specific applications include traditional operations re- search topics (inventory, queueing, maintenance, reli- ability), as well as several in microeconomics (search and research) and in letter and letter grading.

210C. Network Flows and Integer Programming. (4) Discussion, three hours. Preparation: linear pro- gramming. Survey course to (1) lay foundations for more advanced study of graphs, network flow models, and integer programming models and their applica- tions, (2) establish connections between these techni- cal 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 170A or 171A, and 100A. Topics in classical and numerical methods of optimization for situations where models must be nonlinear, with special emphasis on case of “convexity.” Topics include classical approaches to optimization, theoretical aspects of optimization, and development of strategies and survey of currently available comput- er software. S/U or letter grading.

211B. Large-Scale Mathematical Programming. (4) Discussion, three hours. Requisite: course 210A. The- ory, methods, and applications of optimization for situa- tions where models are large and have special struc- ture, as is often the case in real applications. Focus on ways of exploiting special structures with combinator- al, multidimensional, and optimization software. S/U or letter grading.


212B. Decision Sciences Models II. (4) Lecture, four hours. Requisites: course 407. Broad survey of nonlinear, time-staged, and probabilistic models for managerial decision making. Application areas include finance, marketing, facilities design, production, and energy systems. S/U or letter grading.


213B. Statistical Methods in Management. (4) Dis- cussion, three hours. Requisite: course 402. Introduction to parameter and interval estimation, simple and multiple linear regression and correlation, fixed, ran- dom, and mixed effects analysis of variance models and nonparametric statistics, all as they apply to man- agement studies. S/U or letter grading.

214. Managerial Decision Making. (4) Dis- cussion, three hours. Preparation: working 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 infor- mation; interpretation of coefficients from multivariate exploratory models (e.g., principal axes and factor analysis models); survey of multivariate statistical proce- dures (e.g., multiple discriminate analysis, multivari- ate analysis of variance, canonical correlation, and confirmatory factor models). S/U or letter grading.

215. Managerial Decision Analysis. (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 be- havioral economics. Topics include decision structur- ing, chance processes, forecasting, confidence, likeli- hood judgment, risk perception and risk-taking, deci- sion under uncertainty, multiattribute decision making, and mental accounting, intertemporal choice, alloca- tion decisions, organizational decision making, choice architecture, happiness, and well-being. S/U or letter grading.

215. Negotiations Analysis. (4) Discussion, three hours. Series of negotiation exercises to foster devel- opment of students' negotiation skills and experience. Use of economic and game-theoretic concepts in de- brief to gain insight and develop framework for finding the broad negotiation principles applicable. S/U or let- ter grading.


216A. Simulation of Modeling and Analysis. (4) Discussion, three hours. Preparation: probability theory, mathematics 406, 407, or Statistics 100A. Topics include computer simulation models for managerial decision making under uncertainty or complex dynam- ics, with emphasis on simulation methodology such as design, validation, operating procedures, and interpre- tation of results. Application areas include finance, marketing, and production. S/U or letter grading.

217A. Decision Analysis. (4) Lecture, three hours. Requisite: course 402. Managerial decision making occurring in multifocal or multidimensional, areas of control of 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 introduction of frameworks such as product design, marketing, production, and strategic decisions. S/U or letter grading.

217B. Game Theory. (4) Discussion, three hours. Requisites: course 213B. Univariate Box/Arrow analysis, transfer functions, and intervention analysis. Relationship between econometric and time-series models, Granger causality, multiple time-series analy- sis. New computer applications in modeling and forecasting. S/U or letter grading.

218. Public Services and Private Functions. (4) Lecture, three hours. Preparation: knowledge of multiple linear regression and correlation, fixed, random, and mixed effects analysis of variance models and nonparametric statistics, all as they apply to man- agement studies. S/U or letter grading.

218A. Business Forecasting: Turning Numbers into Knowledge. (4) Discussion, three hours. Prepar- ration: familiarity with linear regression. Examination of one approach to analytical thinking, combining numerical 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. Let- ter grading.
218A. Selected Topics in Decisions, Operations, and Technology Management. (1 to 4) Discussion, three hours. Newly developing topics of interest to Ph.D. students. Topics have included reliability and optimal maintenance theory, large-scale distribution/inventory systems, and Markovian decision processes under uncertainty. May be repeated for credit. S/U or letter grading.


221A. Principles of Management. (4) Lecture, three hours. Requires: course 403. Use of basic microeconomics to answer what information is needed to make managerial 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 practical approach to teach students to recognize 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. Special Advanced Topics in Accounting. (4) Lecture and cases, three hours. Requires: course 403. Examination of advanced topics in accounting that arise in business combinations and international accounting practices, including principles underlying consolidated financial statements, treatment of unconsolidated subsidiaries and affiliate investments, translation of foreign exchange and, valuation of derivatives for hedging exchange risk. S/U or letter grading.


229A. Special Topics in Accounting. (4) Lecture, three hours. Designed for Ph.D. students. Examination in depth of topics of current concern in accounting, such as application of information economics and principal-agent model to accounting.


229X and 229Z. Accounting Workshops. (1-1-2) Discussion, two hours. Designed for Ph.D. students. Intended to develop ability to critically evaluate research in fields relevant to study of accounting. Papers presented in colloquium format by leading scholars in accounting. Active participation and intellectual inter-change encouraged through discussion of papers during colloquium. May be repeated for credit. S/U grading.

230. Theory of Finance. (4) Lecture, three hours. Requires: course 408. Primary focus on valuation of corporate liabilities and other securities under uncertainty. Capital asset pricing model presented rigorously and counter-examples and problems of market pricing such as arbitrage pricing theory and option pricing model, using empirical evidence. Secondary focus on analysis of problems in corporate finance such as optimal financing decisions and role of the market for corporate control. S/U or letter grading.

231A. Topics in Corporate Finance. (4) Lecture, three hours. Requires: courses 230 (or 430), 408. Identification of fundamental issues 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. Requires: courses 408, 430. Identifying and solving financial problems for all types of nonprofit organizations, with attention to funds accounting, budgeting and control, investment decision making, capital structure, and sources of funds for nonprofit organizations. Use of cases. S/U or letter grading.

231C. Corporate Valuation. (4) Lecture, three hours. Requires: courses 230, 403, 408. Preparation: training in econometrics to answer what information is needed to make managerial 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.

231D. Takeovers, Restructuring, and Corporate Governance. (4) Lecture, three hours. Requires: courses 230 (or 430), 408. Examination of issues faced by entrepreneurs who are setting up new firms, as well as decisions of private equity partnership managers and investors. How transactions are structured and why investors and entrepreneurs choose certain contractual arrangements. Development of understanding for institutional context of private equity finance. Time also devoted to leveraged buyouts. S/U or letter grading.

232A. Market and Credit Risk Management. (4) Lecture, three hours. Requires: courses 230 (or 430), 408. Theory and practice of financial institutions and stock exchanges. Main topics include deposit insurance and regulation, international banking, bank microstructure, and investment banking. S/U or letter grading.


232C. International Financial Markets. (4) Lecture, three hours. Requires: courses 230 (or 430), 408. Examination of issues faced by entrepreneurs who are setting up new firms, as well as decisions of private equity partnership managers and investors. How transactions are structured and why investors and entrepreneurs choose certain contractual arrangements. Development of understanding for institutional context of private equity finance. Time also devoted to leveraged buyouts. S/U or letter grading.

232D. International Financial Markets. (4) Lecture, three hours. Requires: courses 230 (or 430), 408. Examination of issues faced by entrepreneurs who are setting up new firms, as well as decisions of private equity partnership managers and investors. How transactions are structured and why investors and entrepreneurs choose certain contractual arrangements. Development of understanding for institutional context of private equity finance. Time also devoted to leveraged buyouts. S/U or letter grading.

232E. International Financial Markets. (4) Lecture, three hours. Requires: courses 230 (or 430), 408. Examination of issues faced by entrepreneurs who are setting up new firms, as well as decisions of private equity partnership managers and investors. How transactions are structured and why investors and entrepreneurs choose certain contractual arrangements. Development of understanding for institutional context of private equity finance. Time also devoted to leveraged buyouts. S/U or letter grading.

232F. Behavioral Finance. (4) Lecture, three hours. Requirements: courses 230 (or 430), 408. Examination of issues faced by entrepreneurs who are setting up new firms, as well as decisions of private equity partnership managers and investors. How transactions are structured and why investors and entrepreneurs choose certain contractual arrangements. Development of understanding for institutional context of private equity finance. Time also devoted to leveraged buyouts. S/U or letter grading.

233A. International Financial Markets. (4) Lecture, three hours. Requires: courses 230 (or 430), 408. Examination of issues faced by entrepreneurs who are setting up new firms, as well as decisions of private equity partnership managers and investors. How transactions are structured and why investors and entrepreneurs choose certain contractual arrangements. Development of understanding for institutional context of private equity finance. Time also devoted to leveraged buyouts. S/U or letter grading.

233B. Financial Institutions. (4) Lecture, three hours. Requires: courses 230 (or 430), 408. Examination of issues faced by entrepreneurs who are setting up new firms, as well as decisions of private equity partnership managers and investors. How transactions are structured and why investors and entrepreneurs choose certain contractual arrangements. Development of understanding for institutional context of private equity finance. Time also devoted to leveraged buyouts. S/U or letter grading.

233C. Financial Institutions. (4) Lecture, three hours. Requires: courses 230 (or 430), 408. Examination of issues faced by entrepreneurs who are setting up new firms, as well as decisions of private equity partnership managers and investors. How transactions are structured and why investors and entrepreneurs choose certain contractual arrangements. Development of understanding for institutional context of private equity finance. Time also devoted to leveraged buyouts. S/U or letter grading.

233D. Financial Management of Multinational Corporations. (4) Lecture, three hours. Requires: courses 230 (or 430), 408. Examination of issues faced by entrepreneurs who are setting up new firms, as well as decisions of private equity partnership managers and investors. How transactions are structured and why investors and entrepreneurs choose certain contractual arrangements. Development of understanding for institutional context of private equity finance. Time also devoted to leveraged buyouts. S/U or letter grading.

233E. Financial Management of Multinational Corporations. (4) Lecture, three hours. Requires: courses 230 (or 430), 408. Examination of issues faced by entrepreneurs who are setting up new firms, as well as decisions of private equity partnership managers and investors. How transactions are structured and why investors and entrepreneurs choose certain contractual arrangements. Development of understanding for institutional context of private equity finance. Time also devoted to leveraged buyouts. S/U or letter grading.

233F. Financial Management of Multinational Corporations. (4) Lecture, three hours. Requires: courses 230 (or 430), 408. Examination of issues faced by entrepreneurs who are setting up new firms, as well as decisions of private equity partnership managers and investors. How transactions are structured and why investors and entrepreneurs choose certain contractual arrangements. Development of understanding for institutional context of private equity finance. Time also devoted to leveraged buyouts. S/U or letter grading.

234A. International Financial Markets. (4) Lecture, three hours. Requires: courses 230 (or 430), 408. Examination of issues faced by entrepreneurs who are setting up new firms, as well as decisions of private equity partnership managers and investors. How transactions are structured and why investors and entrepreneurs choose certain contractual arrangements. Development of understanding for institutional context of private equity finance. Time also devoted to leveraged buyouts. S/U or letter grading.

234A. International Financial Markets. (4) Lecture, three hours. Requires: courses 230 (or 430), 408. Examination of issues faced by entrepreneurs who are setting up new firms, as well as decisions of private equity partnership managers and investors. How transactions are structured and why investors and entrepreneurs choose certain contractual arrangements. Development of understanding for institutional context of private equity finance. Time also devoted to leveraged buyouts. S/U or letter grading.

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folio choice, standard discounted cash flow approaches, and no-arbitrage framework for valuing financial securities. Basic paradigms of asset pricing, such as capital asset pricing model (CAPM), arbitrage pricing theory (APT), and Fama-French Three-Factor model. Development and illustration of dynamic portfolio selection and optimization approaches. Brief introduction to number of important asset classes such as equities, corporate bonds, real estate, and venture capital. S/U or letter grading.


237G. Computational Methods in Finance. (4) Lecture, three hours. Limited to Master of Financial Engineering Program students. Quantitative and computational tools used in finance, including numerical techniques such as implementation of binomial and trinomial option pricing algorithms for computing derivative prices and hedge ratios, simulation-based algorithms for pricing American options, and numerical solution of partial differential equations that appear in financial engineering. S/U or letter grading.

237H. Quantitative Asset Management. (4) Lecture, three hours. Limited to Master of Financial Engineering Program students. Application of state-of-art quantitative techniques to asset management problems. Analysis of portfolio, asset class, and sector models in depth, portfolio optimization and construction, and dynamic strategies such as pairs trading, long-term and short-term momentum trades, and mean reversion to understand financial anomalies. Major forms of asset management structures such as mutual funds, hedge funds, exchange traded funds (ETFs), special investment vehicles, and some primary types of trading strategies used by these organizations. S/U or letter grading.


237K. Introduction to Credit Markets. (4) Lecture, three hours. Limited to Master of Financial Engineering Program students. Introduction to building and implementation of credit models for use by financial institutions and quantitative analysis of corporate debt securities and in-depth introduction to credit derivatives markets. Discussion of structured credit products such as both cash and synthetic collateralized debt obligations. S/U or letter grading.

237M. Special Topics in Financial Engineering. (2 to 4) Lecture, three hours. Limited to Master of Financial Engineering Program students. In-depth examination of problems or issues in one area of current concern in financial engineering. May be repeated for credit with instructor change. S/U or letter grading.

238. Special Topics in Finance. (4) Lecture, three hours. Requisites: courses 230 (or 430), 408. Selected topics in finance theory, empirical studies, and financial policy. May be repeated for credit with instructor change. S/U or letter grading.

239A. Theory of Exchanges under Uncertainty. (4) Lecture, three hours. Primarily designed for Ph.D. students, but well-prepared master's students may find course useful in their preparation. Focuses on theory of exchange developed as introduction to the theoretical literature on pricing of capital assets. S/U or letter grading.

239B. Theory of Investment under Uncertainty. (4) Lecture, three hours. Primarily designed for Ph.D. students, but well-prepared master's students may find course useful in their career preparation. Foundations of theory of firm capitalization and investment decisions, with special attention to questions of exchange and allocative efficiency. S/U or letter grading.

239C. Empirical Research in Finance. (4) Lecture, three hours. Preparation: 408 in econometrics. Primarily designed for Ph.D. 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. Ph.D. Seminar: Corporate Finance. (4) Seminar, three hours. Designed for Ph.D. students. Advanced study of corporate finance with emphasis on empirical analysis and applications of empirical research. May be repeated for credit with instructor change. S/U or letter grading.

239X-239Y-239Z. Finance Workshops. (1-1-2) Discussion, 90 minutes. Designed for Ph.D. students. 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.


240D. Operations Strategy: Theory and Practice. (4) Discussion, three hours. Requisite: course 410. Definition and scope of operations strategy. Integrated framework for assessing crucial fit between operational strategies and corporation’s strategic positioning. Cases used to illuminate strategic issues in both manufacturing and nonmanufacturing situations. Object of practicum, or applied strategy aspect of course, to provide students with skill in identifying operationally appropriate business processes and metrics required to implement enterprise’s strategic position. 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 beyond the national and regional level. Provides understanding of strategic, tactical, and operational issues in supply chain management, with generative attention to emerging digital economy. S/U or letter grading.


241A. Technology Management. (4) Lecture, three hours. Requisites: courses 410, 411A, 411B. Management of high-technology industries, technology creation, and utilization of technology and knowledge assets. Research and product development, product and technology research, network structures, high-technology markets, competition, and technology strategies. Case examples from sectors such as computing, telecommunications, e-business, medical devices, nanotechnology, advanced transportation systems, and electronics. S/U or letter grading.


242B. Models for Operations Systems Design. (4) Discussion, three hours. Requisite: course 242D. Designed for Ph.D. students. Survey of research literature on models for design of manufacturing and service systems, including long-range forecasting, operational
economies, capacity, location, facilities, processes/technology, work, and work structures. S/U or letter grading.

243B. Inventory Theory. (4) Discussion, three hours. Requisite: course 210B. General discussion of inventory models, with emphasis on characterizing form of optimum policies and efficient computational methods. Determination of optimum order-up-to level, economic lot size, and continuous-time models. S/U or letter grading.


244X-244Y-244Z. Research in Decisions, Operations, and Technology Management. (1-1-2) Lecture, three hours. Designed for first- and second-year Ph.D. students 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, and analytical methods of operation research, introduction to management in information economy, and models for medical management. May be repeated for credit with topic change. S/U or letter grading.


246A. Management in the Information Economy. (4) Lecture, three hours. Designed for M.B.A. and Ph.D. 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, and analytical methods of operation research, introduction to management in information economy, and models for medical management. May be repeated for credit with topic change. S/U or letter grading.

246C. Management in Public and Private Nonprofit Sectors. (4) Designed for graduate students. Examination of roles and management systems of the three sectors of U.S. society: unique aspects and managerial issues of public and private nonprofit organizations and of their political, social, and technical environments. Financial, marketing, and operational considerations and evaluation, control, and ethical issues of service delivery systems.

247A. Environment of the Art World. (4) Consideration and analysis of political, social, economic, and environmental forces in American society as they affect existence and development of arts institutions in the U.S. Exploration of present policies and trends and potential future developments.

247B. Role of Management in Artistic Decision Making. (4) Designed for Ph.D. students. Study of criteria of decision making in artistic institutions, including role of the institution in society, economic environment of the arts, and artistic value systems of arts organizations.

248A. Management in the Entertainment Industry. (4) Discussion, three hours. Requisites: courses 403, 405, 406, 408, 420. Examination of financial and strategic aspects of transactions and company management in the entertainment industry. Topics include organizational behavior and decision making in creative companies; trends in industry structure and competitive economics; accounting issues; institutional and private investment in motion pictures; theatrical distribution, international and ancillary marketing, and developments in technology, work, and work structures. S/U or letter grading.

249A. Special Topics in Public and Private Nonprofit Management. (4) Studies of advanced subjects of current interest in public/not-for-profit management. Emphasis on recent developments and application of specialized knowledge. Topics vary each term. May be repeated for credit with topic change.

249B. Special Topics in Arts Management. (4) Examination of current issues in management of artistic organizations. Relevant combinations of lectures, discussions, case studies, and team research projects.

M250A. Labor Relations: Process and Law. (4) (Same as Public Policy 2522.) Lecture, three hours. Designed for Ph.D. students in management of collective bargaining process; labor-management agreement, administration of the contract, labor-management relations, union structure and goals, and influence of external labor markets on labor relations. S/U or letter grading.


250C. Behavioral Foundations of Human Resource Management. (4) Requisite: course 250B. Topics include development and training; human resource accounting; behavioral foundations of participating management; compensation, productivity, and satisfaction; designing reward systems; and evaluation of organizational effectiveness. Emphasis on understanding, predicting, and influencing human behavior in organizations.

250D. Thesis, One to Three. (1-3) Lecture, one to three hours. Acquisition of strategies that enhance adaptive planning and real-time judgment, based on findings from brain studies and cognitive research. Design of tools to respond to uncertainties and to address situations where intense pressures of time and cost are present. Letter grading.

251. Managing Human Resources. (4) Management of people in organizations, designed for managers as well as personnel specialists. Organized at three related but distinct levels of analysis: (1) day-to-day utilization of people as organizational resources to achieve organizational objectives; (2) personnel management and analysis of methods of operation research, introduction to management in information economy, and models for medical management. May be repeated for credit with topic change. S/U or letter grading.

252A. Management of Employee/Management Participation. (4) Design for providing understanding of systems of employee/management participation around the world (apart from traditional collective bargaining systems). Specific concepts such as worker participation in decision making, industrial democracy, joint consultation, workers' councils, profit sharing.

253. International Political Economy. (4) Lecture, three hours. Examination of political, legal, and social institutions that define modern capitalism and government relations around the world. Analysis of major domestic policy options that nations are pursuing in response to economic globalization and internationalization. Effects on countries that are being formed as result of globalization, including NAFTA, and to nongovernmental organizations created to deal with special problems such as global environmental crises. Letter grade.

254. Pay and Rewards in Organizations. (4) Lecture, three hours. Systematic treatment of pay (compensation) and rewards in organizations, with emphasis on the foundation for outcomes of organizational pay and reward systems and practices that are shaped by strategic, labor market, and motivational considerations. Specific topics include variable compensation, fringe benefits, employee ownership, stock option plans, and noncompensation rewards; compensation and rewards for performance and in entrepreneurial and public organizations; fringe benefits, executive compensation; and international and comparative compensation/reward practices. S/U or letter grading.

255. Comparative Industrial Relations. (4) (Same as Public Policy CM231.) Lecture, three hours; outside study, nine hours. Requisite: course 405 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. S/U or letter grading.

256. Leadership and Ethics. (4) Lecture, three hours. Series of real-life business 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. Examination of management theory and practices in industries where primary product is creative or intellectual (e.g., arts, entertainment, education, high technology, journalism). Consideration of incorporation of work design, employee influence, systems, and business strategies in human resource management. Interpersonal and group process for managing human behavior.

258. Research Seminar: Human Resources and Organizational Behavior. (1 to 4) Seminar, two hours. Designed for Ph.D. students. Examination in depth of problems or issues of current concern in human resource management and organizations, and emphasis on recent contributions to theory, research, and methodology. Of special interest to advanced Ph.D. candidates, academic staff, or distinguished visiting faculty. May be repeated for credit. S/U or letter grading.

259A. Individuals and Groups in Organizations. (4) Lecture, three hours. Designed for graduate students. Doctoral-level survey of classic and emergent theories and research in the area of social behavior in organizations, 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.

259B. Advanced Studies in Human Resource Management. (4) Lecture, three hours. Designed for graduate students. Doctoral-level survey of research literature assessing how organizations utilize human resources to enhance individual, group, and organizational effectiveness. Current theory and research in psychology, anthropology, organization behavior, and economics, including topics such as careers, participation, negotiations, and technology/work systems. S/U or letter grading.

259C. Markets and Organizations. (4) Seminar, three hours. Designed for Ph.D. students. Doctoral-level survey of major organizational behavior, with focus on macro-level organizational topics related to study of organizations and organizational environments. Topics may include demography, organizational change, organizational structure, and networks. Letter grading.

260A. Market Assessment. (4) Lecture, three hours. Requisites: courses 411A, 411B. Development of framework for strategic marketing planning based on customer behavior, market segmentation, product positioning, product life cycle, market...
responsiveness, and competitive reaction. Within this framework, development of key elements in annual marketing plans. Letter grading.


263A. Consumer Behavior. (4) Lecture, three hours. Requisites: courses 411A, 411B. 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 purchasing behavior. S/U or letter grading.

264A. Market Research. (4) Lecture, three hours. Requisites: courses 411A, 411B. Designed for prospective users of research results rather than for specialists in research. Marketing research is aid to management decision making. Development of problem analysis and design of cost-effective methods of marketing research, with increased sensitivity to limitations of marketing data. Letter grading.

264B. Regression with Applications in Marketing and Finance. (4) Lecture, three hours. Requisites: courses 411A, 411B. Designed for prospective users of research results rather than for specialists in research. Marketing research is aid to management decision making. Development of problem analysis and design of cost-effective methods of marketing research, with increased sensitivity to limitations of marketing data. Letter grading.

265A. New Product Development. (4) Lecture, three hours. Requisites: courses 411A, 411B. Examination of new product development (NPD) process with objectives of learning key tools and methods and applying them to case studies, exercises, and course project. Products viewed through three lenses: quantifiable rational attributes, appeal due to emotional characteristics, and cost/technology competitive tradeoffs. NPD process also investigated through five key phases: ideation, concept generation and selection, detailed design, prototyping and testing, and ramp-up and product launch. Coverage of mass customization, parallel prototyping, and creativity. Letter grading.


267. One-to-One Marketing. (4) Lecture, three hours. Requisites: courses 402, 411A, 411B. Use of notion of "customer lifetime value" as an organizing principle and application to one-to-one marketing context. Frameworks and analytical tools for interacting with customers and learning about their preferences as they evolve through four stages: (1) customer acquisition, (2) initial post-promotion purchasing, (3) mid-maturity purchase and transaction behavior, and (4) customer attrition or switching to other product lines. S/U or letter grading.

268. Selected Topics in Marketing. (4) Lecture, three hours. Requisites: courses 411A, 411B. 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.

269A. Theory in Marketing. (4) Serves as mechanism to introduce students to development of marketing thought. Issues pertaining to general topic of theoretical development and testing. Prepares students for conducting theoretically grounded research in marketing.

269B. Research in Marketing Management. (4) Discussion 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 purchasing behavior. S/U or letter grading.

269C. Quantitative Research in Marketing. (4) Discussion, three hours. Designed for Ph.D. students in management and related fields. Students are assumed to have good background in marketing principles and to be familiar with probability, statistics, mathematical programming, and econometrics. Review of a range of quantitative models as applied in marketing research. S/U or letter grading.

269D. Behavioral Research in Marketing. (4) Seminar, three hours. Designed for Ph.D. 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. S/U or letter grading.

269E. Special Research Topics in Marketing. (4) Designed for Ph.D. students. Advanced selected topics in consumer behavior and related areas. Recent research in area of one or two topics in current research and theory. May be repeated for credit.

269X-269Y. Workshops: Marketing. (1-1-2) Discussion of research presented. May be repeated for credit. S/U or letter grading.


271C. Emerging Technologies. (4) Lecture, three hours. Special topics in new and emerging technologies such as mobile computing, cloud computing, and visualization. Assessment of industrial opportunities and impacts. Topics vary. May be repeated for credit. S/U or letter grading.


272B. Workshop: Information Systems Research. (4) Seminar, three hours. Designed primarily for Ph.D. 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.


274X-274Y. Current Research in Information Systems. (1-1-2) Seminar, two hours. Limited to Ph.D. students. Year-long sequence associated with Information Systems Colloquium. Students to attend 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 or letter grading.

M277A-M277B. Real Estate Finance Law. (1 to 8 each) (Formerly numbered M278C.) (Same as Law M209.) Lecture, three hours. Course M277A is enforced requisite to M277B. 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 mortgage substitutes, assignments of rents, receiverships, prepayment, foreclosure, priorities, California antideficiency legislation, impact of borrower bankruptcy on mortgage lenders, construction lending, future interests, and California antideficiency legislation. In Progress (269X, 269Y) and S/U or letter grading.

M277A-M277B. Real Estate Financing. (4) Lecture, three hours. Requisites: courses 408, 430. Investor-oriented course in which real estate and business trends are evaluated to address real estate investment opportunities. Use of current financial, economic, and 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.

M278. Urban Real Estate Financing and Investing. (4) Lecture, three hours. Requisites: courses 408, 430. Analysis of money, capital, and mortgage markets to determine potential availability and costs of mortgage
money from alternative sources. Evaluation of various sources of funds to determine factors influencing decisions to make mortgage loans. Examination of all types of lending instruments, particularly mortgage instruments, and mortgage-based securities for their impacts on real estate investment decisions. 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 financial analysis and valuation in value of contexts (single and multifamily residential, commercial/industrial, shopping center, and hotel properties), real estate taxation, real estate law, development processes, security, REITs, and leasing and workout of troubled properties. S/U or letter grading.

279B. Entrepreneurial Real Estate Development. (4) Lecture, three hours. Requisites: courses 278A (or 278A), 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 panels of investors included. S/U or letter grading.

280A. Research Philosophies, and Methodology in Human Systems. (4) Discussion, three hours. Designed for Ph.D. students. Survey of seminal studies of human systems, including individual, group, and intergroup behavior, and organization behavior. Consideration of objectivist and subjectivist philosophies of science and their implications for related methodologies, including experimentation, field studies, case approaches, and a range of analytic and prescriptive procedures in data collection. Emphasis on existing literature, philosophy of science, and concepts. May be repeated for credit. S/U or letter grading.

280B. Personal and Professional Development. (4) Discussion, three hours. Designed for Ph.D. students. Provides setting where students may explore 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.

280C. Research Design in Human Systems Studies. (4) Discussion, three hours. Designed for Ph.D. students. Process of designing studies of human systems, including choice of research topics. Actively involves students in preparation of research proposals for research papers and Ph.D. dissertations. May be repeated for credit and for letter grading.

281A. Sociotechnical Systems. (4) Designed for graduate students. Introduction to systems concepts and view of work organizations as interacting social and technological systems open to forces from the surrounding environment. Focus on developing sociotechnical systems analytic approach and understanding advantages of this approach for designing and managing organizations.

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. Special attention to knowledge about satisfaction, motivation, and productivity in organizations.

282. Task and Team Processes. (4) Lecture, three hours. Requisite: course 281A or 281B. Structures, processes, and interrelations of work groups in sociotechnical systems. Emphasis on understanding how group processes interact with physical/technical environment. Impacts practical knowledge of task group functioning through class exercises and field observations. Consideration of team concepts and project group functioning. S/U or letter grading.

284A. Organization Design. (4) Lecture, three hours. Requisite: course 281A or 281B. Survey of organizational design theories and methods, including bureaucratic, participative, and cognitive models. Development of specific methods ranging from microdesign of jobs to macrodesign of total organizational systems. Special emphasis on sociotechnical differentiation and integration models. S/U or letter grading.

284B. Organization Development. (4) Discussion, three hours. Designed for graduate students. Analysis of effects of organizational and managerial practices on individual self-fulfillment and systems effectiveness. Theories of control and action research methods in organization development. Theory merged with practice through seminar discussions of field observations. S/U or letter grading.

284C. Management of Entrepreneurial Organizations. (4) Lecture, three hours. Issues involved in developing and managing entrepreneurial organizations. Topics include organizational growth, managerial tools, strategic planning, team 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. Theoretical and practical approaches to influencing 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 and personality factors affecting managerial communication 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, personal, and cross-cultural aspects. S/U or letter grading.

286. Negotiations Behavior. (4) Discussion, three hours. Presentation of theoretical principles and concepts of negotiation and communication through lectures and readings, with focus primarily on improving practical negotiating skills through experiential learning (i.e., negotiations simulations). 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 and experiential understanding of dynamics of small group training and its facilitating, including “sensitivity” basic groups, group counseling, self-help groups, small groups, and community in major organizational tensions. Analysis of relevant theory, research findings, and case studies. S/U or 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 theoretical positions, extending and consolidating behavioral science knowledge and application. May be repeated for credit. S/U or letter grading.

288B. Current Issues in Sociotechnical Systems and Organization Design. (4) Discussion, three hours. Designed for graduate students. Current topics in analysis and design of organizations as sociotechnical systems engaged with various technologies and environments. Development of approaches emanating primarily from Europe, the Orient, and the U.S. In-depth comparisons of selected job and organizational design cases. May be repeated for credit. S/U or letter grading.

288C. Selected Topics in Human Systems Studies and Organizational Behavior. (4) Discussion, three hours. Designed for graduate students. Psychological and social psychological aspects of human behavior and performance in modern organizations. Communication models, empirical findings, and applications of such topics as attitudes and values, cognitive and perceptual processes, behavioral conflict, and individual change processes. May be repeated for credit. S/U or letter grading.

288D. Current Issues in Human Systems Change and Development through Consulting. (4) Discussion, three hours. Current perspectives and methods of enterprises (mainly in the U.S.) involving development of new products or process, and development of new business opportunities and starting a business.

288E. Proseminar: Behavioral and Organizational Development Colloquium. (4) Discussion, three hours. Designed for graduate students. Series of presentations by scholars and practitioners in behavioral and organizational sciences, with focus on integrative themes or major issues in the field. Designed to provide dialogue among students and faculty on significant topics, controversies, and leading-edge ideas. May be offered in one or successive terms and may be repeated for credit. S/U or letter grading.


M292A. Research and Development Policy. (4) (Also Public Policy M292A.) 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; behavior of research and development (as element of science, technology, and organizational goals; assessing of and forecasting technological futures. S/U or letter grading.

M292B. Growth, Science, and Technology. (4) (Also Public Policy M292B.) Lecture, three hours. Economic growth and change. Role of advances in science and technology, and actions of maximizing innovators and factors impinging on their behavior. How macroeconomic (fiscal, monetary, foreign exchange policies) influence productivity, and transform nature of and population of firms in existing industries. S/U or letter grading.

292C. Comprehensive Planning in Public Sector. (4) Evolving modes of planning under complexity, with particular emphasis on public sector. Development of policy through standard setting, bargaining, and regulating governing relationships; reality and value judgments; social and technical dimensions of alternatives; and social and technological forecasting.

293A. Political Environment of American Business. (4) Lecture, three hours. Evaluation of certain critical changes in political and economic structure of the American political system. Designed to provide clearer understanding of principal features of American politics, especially as they influence business enterprise.

293C. 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.


295B. Small Business Management. (4) Exploration of crucial aspects in managing small business enterprises. Emphasis on identification and analysis of characteristics of prospets for small firms and as context for exploring new business opportunities and starting a business.

295C. Corporate Entrepreneurship. (4) Inquiry into nature of entrepreneurial and effective implementation of entrepreneurial strategies in large industrial enterprises. Emphasis primarily on managerial features at identified, development, and exploitation of entrepreneurship and management of new product or process development, and effective new venture management in a corporate context.
295D. Business Plan Development. (4) Lecture, three hours. Fundamentals of developing effective written business 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. Comparative study of practices of international management with emphasis on development and implementation of managerial issues of policy and action within context of a multinational corporation, with emphasis on problems of adaptation to different sociocultural, legal, economic, and political environments. Required reading for student to prepare research paper presented in colloquium format by leading scholars in management strategy and policy. Active participation and interpersonal interchange encouraged through discussion of papers in sessions prior to and during colloquium. May be repeated for credit. S/U grading.

295E. Seminar: Neuroeconomics. (4) Seminar, three hours. Discussion and research papers related to graduate students. Analysis and discussion of research on cognitive and neural bases of decision making. S/U or letter grading.

298X-298Y. Management Strategy and Policy Workshops. (1-1-2) Discussion, three hours. Designed for Ph.D. students. Conducted as colloquia with emphasis on the methodology and direction of major research projects. Designed to stimulate research in management strategy and policy. Active participation and intellectual interchange encouraged through discussion of papers in sessions prior to and during colloquium. May be repeated for credit. S/U grading.


299R. Research Methods in Management. (4) Discussion, three hours. Designed for Ph.D. students. Provision of support for research projects and proposal papers related to research for 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 must attend as assistant to an instructor while 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. Mathematics for Management. (4) Lecture, three hours. Limited to graduate students. General mathematics review for M.B.A. students. Fundamental mathematics, including topics from algebra, differential calculus, and other mathematics, linear and exponential functions, probability, and statistics; applications, including economic theory, finance, time value of money, inventory management, linear programming, and probability. S/U grading.

401A-401B. Managerial Problem Solving. (3-3) Discussion, three hours. Use of international business simulation and series of complex multicasted cases to learn to apply M.B.A. core disciplines in real-world, globally focused business problems. In Progress (401A) and letter (401B) 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. S/U or letter grading.


404. Information Systems. (4) Lecture, three hours. Overview of information systems in organizations from perspective of system and user. Managerial and strategic uses of information systems. Technologies that underlie these systems, and ways such systems are developed and managed. S/U or letter grading.


408. Foundations of Finance. (4) Lecture, three hours. Introduction to managerial finance. Topics include time value of money, discounting and present value, evaluation of bond valuations, fixed income securities, 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, 405. Principles and decision analysis related to effective utilization of factors of production in manufacturing and non-manufacturing activities for both intermittent and continuous systems. Production organizations, analytic methods and tools, facilities design, and design of control systems for production operations. Letter grading.


411B. Marketing Management II. (4) Lecture, three hours. Requisite: course 411A. Examination of analytical and creative decision-making in product and resource management to allocate resources to elements of marketing mix. Topics include market sizing based on diffusion of innovation and trial-and-repeat processes, customer preference measurement and market segmentation techniques, and optimal marketing resource allocation across products and customers. 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 functional roles in designing organizational structures, creating and maintaining planning and control information, incentive systems, different patterns of human interaction such as strategies and systems tend to produce. Letter grading.

413A. Managerial Computing. (4) Lecture, three hours. Individual computing in support of strategic analysis, decision-making, and resource management. Use of personal productivity tools, such as Excel and VBA, and network resources for data access. Emphasis on hands-on exercises. S/U or letter grading.

413B. Advanced Topics in Managerial Computing. (4) Lecture, three hours. Enforced requisite: course 413A. Advanced topics in individual computing in support of strategic analysis, decision-making, and management communication. Emphasis on hands-on exercises. S/U or letter grading.

421A-421B. Management Communications I, II. (2-2), Lecture, three hours. Key attributes, knowledge, skills, and strategies necessary to succeed communica-
tively in workplace. Examination of business presen-
tation and use of interpersonal communication. Use of interpersonal communication skills. Lectures, experien-
tial activities, video analyses, and student activities supplemental by extensive individualized coaching by professors. In Progress (421A) and S/U or letter (421B) grading.

422. Analysis and Communications. (4) Discus-
sion, three hours. Designed for graduate students. Study and practice of oral and written management communications, including audience analysis, persuas-
ion, revising and editing, presentation of technical in-
formation, and uses of computer technology. Orga-
nized around writing and speaking exercises. Per-
sonal attention to students’ written communications and oral presentations.

430. Corporate Finance. (4) Lecture, three hours. Required. Preparation: completion of two terms of calculus and its relationship to the community and society in the context of business. Economic, financial, and political environment by comparing and contrast-
ing the U.S. and important historical and cultural as-
psects of a destination country. May be repeated for cred-
it. Letter grading.

440. International Preorientation. (1) Lecture, six hours. Limited to international students in M.B.A. pro-
gram. Intensive communication workshop that meets six times (Saturdays included) per week for three weeks. Basic listening, speaking, writing, and working/ leadership teams for case analysis, cold call participation, preparation of written assignments. Introduction to terms and career resources. May not be applied toward M.B.A. degree. Offered in summer only. S/U grading.

444A-444B. Applied Management Research: Two-
Quarter Plan, (4-4) Fieldwork, four hours. Must be taken in second year (or its equivalent for part-time stu-
dents). Supervised study of an organization, including establishment of client/consultant relationships, identi-
fication of problems or strategic questions, design of study, collection and analysis of data, development and reporting of implementable recommendations. In Progress (444A) and S/U or letter (444B) grading.

445. Applied Field Research. (8) Fieldwork, eight hours. Must be taken in second year (or its equiva-
lent for part-time students). Supervised study of an organization, including establishment of client/consult-
tant relationships, design of study and collection and analysis of data, development and reporting of implementable 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, in-
tergroup, total organization, and interorganizational setting. Letter grading.

452. Fieldwork in Technical Assistance for Minority Business Enterprise. (1 to 4) Preparation: comple-
tion of first year of master’s program. Supervised field work experience and other formalized technical assistance for business firms and manage-
ment in ethnic communities; seminars and other shared learning experiences in transmitting business administrative knowledge to the urban ghettos, and rural areas.

453. Fieldwork in Arts Management. (4 to 12) Su-
 pervised field experience and practical work in all phases of an arts organization (pictorial, performing, or community), concentrating on its managerial problems and its relationship to the community and society in general.

454. Fieldwork in Organizations. (4) Fieldwork, to be arranged. Preparation: completion of two terms of M.B.A. program. Supervised, nonpaid practical experi-
ence or fieldwork in an organization as an intern or fel-
low. Execution of predetermined assignment(s) pursu-
ant to a defined program of study which may include formal coursework. May not be repeated for credit. S/U or letter grading.

455E. International Exchange Program. (2 to 16) Lecture, 30 hours; discussion, 10 hours. Students at-
tend to four M.B.A.-level classes at institutions with exchange agreements with Anderson School. Some courses may be taught in local language. In addition to learning subject matter of courses, intent is to provide opportunity for students to enhance their knowledge of region while exchanging ideas and views with their peers at that institution. S/U or letter grading.

457. Fieldwork in Investment Management. (4) Dis-
cussion, three hours. Use of academic theories learned in a practical experience by managing a port-
folio started with donated funds. Mirrors situations ex-
perienced by typical money management firms and in-
cludes investment strategy, asset allocation, security analysis, and organizational issues. S/U or letter grading.

458. International Studies. (4) Lecture, three hours; presentations, site visits, and discussion, 20 hours. Preparation: completion of first-year core courses in Fully Employed M.B.A. Program. Taught in English. Com-
prehensive one-week program in one foreign country with five lectures at UCLA before and/or after trip. Courses taught in collaboration with faculty members from partner institutions in that country. Attendance at presentations by government offi-
cials and business executives in destination country. Exploration of domestic operations in desti-
nation country through site visits, study of economy and political environment by comparing and contrast-
it with U.S. and important historical and cultural as-
psects of destination country. May be repeated for cred-
it. Letter grading.

459E. International Exchange. (2 to 4) Lecture, three hours; discussion and site visits, 20 hours. Prepa-ation: completion of first-year core courses in Fully Employed M.B.A. Program. Taught in English. Com-
prehensive one-week program in one foreign country. Cours-
es taught by faculty members from partner institutions in desti-
nation country. Topics vary but are tailored to M.B.A. curriculum. Exposure to local business practic-
is, visiting companies, and exploration of local cultural and historical sites. S/U or letter grading.

460A-460B. Managing Finance and Financial 
Emerging Enterprises. (2-2) Lecture, three hours. Course 460A is enforced requisite to 460B. Designed for second-year graduate students. Emphasis on financ-
ial, control, and investment issues confronting rapidly growing firms. Concepts, related models, and applica-
tions; capital budgeting, capital structure, and corpo-
rate governance. S/U or letter grading.

461A. Leadership Foundations I. (2) Lecture, two hours. Limited to Executive M.B.A. Program students. Focus on individual problem-solving and decision-
making skills. Alternative conceptual frameworks pre-
sented for augmenting diagnostic and decision-making skills of individuals. Use of readings, cases, decision simulations, and discussions to explore areas of chart-
ing job and career progression, working with others, and shaping work culture. S/U or letter grading.

461B. Leadership Foundations II. (1) Lecture, one hour. Limited to Executive M.B.A. Program students. Continuation of focus on development of leadership strengths and weaknesses, with emphasis on interpersonal problem solving and decision making and team design and develop-
ment. Readings, cases, decision simulations, peer coaching, and discussions. In Progress grading (credit to be given only on completion of course 461C).

461C. Leadership Foundations II. (1) Lecture, one hour. Limited to Executive M.B.A. Program students. Continuation of course 461B. Further exploration of leadership strengths and weaknesses, with emphasis on individual peer coaching, conflict management, in-
dividual goal assessment. Readings, cases, decision simulations, peer coaching, and discus-
sions. S/U or letter grading.

461D. Leadership Foundations III. (1) Lecture, one hour. Limited to Executive M.B.A. Program students. Continuation of course 461C. Facilitation of self-evalu-
ation of leadership strengths and weaknesses, with emphasis on career development, social networks, and organizational design. Readings, cases, decision simulations, peer coaching, and discussions. S/U or letter grading.

461E. Leadership Foundations IV. (1) Lecture, one hour. Limited to Executive M.B.A. Program students. Continuation of course 461D. Preparation: completion of course 461E. Supervision of course 461D. Preparation of leadership strengths and weaknesses, with emphasis on individual leadership and organizational change. Readings, cases, decision simulations, peer coaching, and discussions. S/U or letter grading.

ed. Topics include traditional antitrust regulations, new trends in antitrust, private versus government antitrust, securities regulation, environmental regulations, and a business firm’s optimal response to regulation.

463. Data Analysis and Management Decisions un-
der Uncertainty. (4) Lecture, four hours. Limited to Executive M.B.A. Program students. Survey of statistical methods for evaluating corporate per-
formance and use of accounting information for inter-
nal planning and control.

465A. Quantitative Methods for Managers. (2) Tuc-
key, four hours. Limited to Executive M.B.A. Program students. Survey of modeling approaches to manageri-
al planning and decisions. Emphasis on ability to rec-
ognize situations where models can be used advanta-
geously, to work effectively with model building special-
ists, 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 M.B.A. Program students. Conceptual frameworks for thinking about and making busi-
dess 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 the strategic nature of strong play-
ers, getting away from win-lose mindset, importance of added value of players, anticipating other players’ re-
sponses and their own actions. Letter grading.

466A. Financial Policy for Managers. (4) Lecture, four hours. Limited to Executive M.B.A. Program stu-
dents. Modern financial management deals with deci-
sion 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 M.B.A. Pro-
gram students. Modern financial management deals with decision making under uncertainty for corporate fi-
ancial management, portfolio investment decisions, financial institutions, and international financial manage-
ment. Focus on learning sound theoretical tools and applying them in casework. S/U or letter grading.

467. Management Issues in Information Systems. (4) Limited to Executive M.B.A. Program students. Growing role of information systems in the corporation and how they change ways of doing business. Exam-
iples from airlines, health, computer, communications, distribution, and publishing industries. Strategic, orga-
nizational, and societal implications.

468. Macroeconomics and Economic Forecasting. (4) Lecture, four hours. Limited to Executive M.B.A. Program students. Macroeconomic theory and its ap-
plication to business forecasting. Major economic indi-
cators 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. S/U or letter grading.

469. Management of Human Resources. (4) Limited to Executive M.B.A. Program students. Introduction to major issues of labor resource management, including personnel management, labor economics, labor law, and labor relations — accomplished by examining some major concepts, theories, and research related to each of these topic areas, as well as some practical problems for managers posed by each.

470A. Introduction to Strategic Management Research. (2) Fieldwork, two hours. Limited to Executive M.B.A. Program students. Further research and analysis of strategic issue facing selected company and identified in course 470B. Preparation of final reports and evaluation of student efforts by corporate personnel. S/U or letter grading.

470B. Strategic Management Research. (4) Fieldwork, four hours. Limited to Executive M.B.A. 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 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 M.B.A. 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 M.B.A. Program students. Site visit to selected company, presentation of final reports, and evaluation of student efforts by corporate personnel. S/U or letter grading.

471A-471B. Management Practicum. (2-2) Lecture, three hours. Two-term 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 grading (471B).

472A. Marketing Strategy and Policy. (4) Lecture, four hours. Limited to Executive M.B.A. 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 M.B.A. 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 hours every other week for 13 weeks. Limited to Executive M.B.A. Program students. Analysis of strategic and operating policies and decisions for systems that produce goods and services. Examination of effectiveness of comprehensive planning, inventories, scheduling of resources, distribution systems, and system location. Comprehensive operating problems.


476. Competitive Strategy and Business Policy. (4) Limited to Executive M.B.A. Program students. Study of general management task of forging a competitive and corporate strategy. Emphasis on economics of business and corporate strategy, including methods of organizational and strategic analysis to determine relationship of organizational design and strategic analysis to determine relationship of organizational with its environment. In Progress grading (credit to be given only on completion of courses 470B and 470C).

470. Operations and Technology Management: Systems, Strategies, and Policies. (4) Limited to Executive M.B.A. Program students. Study of general management task of forging a competitive and corporate strategy. Emphasis on economics of business and corporate strategy, including methods of organizational and strategic analysis to determine relationship of organizational design and strategic analysis to determine relationship of organizational with its environment. In Progress grading (credit to be given only on completion of courses 470B and 470C).

477. The Manager and Business/Society Relationships. (4) Limited to Executive M.B.A. Program students. While organizations may, to some extent, choose their immediate environments, there are broad environmental factors and trends that affect most, if not all, organizations. Examination of current environmental 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, ninety minutes to three hours. Limited to Executive M.B.A. Program students. Examination of selected problems and issues in an area of current concern in management. 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.

481. Contemporary Issues in Business: Services Marketing and Customer Asset Management. (4) Lecture, three hours. Designed for prospective users of research results rather than for specialists in research. Market research is aid to management decision making. Development of problem-analysis skills, providing knowledge of concepts and methods of marketing research, with increased sensitivity to limitations of marketing data. Letter 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 not only to enhance their individual abilities in dyadic and group situations but also 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.

484. Asian Business Environment. (4) Lecture, three hours. Theoretical issues related to analysis of countries’ economic, political, and social conditions. Topics include political risk analysis, demographics, urbanization. Application to scenario planning in Asia-Pacific region/countries. Letter grading.

485. Corporate Entrepreneurship. (4) Lecture, three hours. Managerial efforts aimed at identification, development, and implementation of new ventures or process innovations, management of new product or process development, and effective new venture management in context of large corporations in 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 entrepreneurial 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 the challenges as leaders. Letter grading.

501. Cooperative Program, (2 to 8) Preparation: consent of UCLA AGSM graduate advisor 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.

506. Research in Management. (1 to 8) Directed individual study or research. May be repeated. S/U or letter grading. Limited to Executive M.B.A. Program students.

507. Preparation for Qualifying Examinations. (4 or 12) Preparation for master’s comprehensive examination or Ph.D. qualifying examinations. S/U grading.


Materials Science and Engineering

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Gregory P. Carman, Ph.D.

Jane P. Chang, Ph.D.

Yong Chen, Ph.D.

Bruce S. Dunn, Ph.D. (Nippon Sheet Glass Company Professor of Materials Science)

Nasr M. Ghoniem, Ph.D.

Mark S. Goorsky, Ph.D.

Vijay Gupta, Ph.D.

Robert F. Hicks, Ph.D.

Richard B. Kaner, Ph.D.

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Professors Emeriti

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David L. Douglas, Ph.D.

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Kanj I Ono, Ph.D.

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George H. Sines, Ph.D.

Christian N.L. Wagner, Dr.rer.nat.

Alfred S. Yue, Ph.D.

Associate Professor

Ioanna Kakoulli, D.Phil.
Materials Science and Engineering B.S.

**Capstone Major**

The ABET-accredited 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; Computer Science 31 (or another programming course approved by the Faculty Executive Committee); Materials Science and Engineering 10, 90L; Mathematics 31A, 31B, 32A, 32B, 33A, 33B; Physics 1A, 1B, 1C (or Electrical Engineering 1).

**The Major**

Required: Chemical Engineering 102A (or Mechanical and Aerospace Engineering 105A), Civil and Environmental Engineering 101 (or Mechanical and Aerospace Engineering 101), 108, Electrical Engineering 100, Materials Science and Engineering 104, 110, 110L, 120, 130, 131, 131L, 132, 143A, 150, 160, Mechanical and Aerospace Engineering 181A or 182A; two laboratory courses (4 units) from Materials Science and Engineering 121L, 141L, 143L, 161L; 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 three major field elective courses (12 units) from Chemical Engineering 114, Civil and Environmental Engineering 130, 135A, Electrical Engineering 2, 123A, 123B, 124, Materials Science and Engineering 111, 121, 122, 151, 161, 162, Mechanical and Aerospace Engineering 156A, 166C, plus at least one elective course (4 units) from Chemistry and Biochemistry 30A, 30AL, Electrical Engineering 131A, Materials Science and Engineering 170, 171, Mathematics 170A, or Statistics 100A.

For information on University and general education requirements, see the College and Schools section earlier in this catalog.

**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.

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. Enforced requisites: Chemistry 20, and Electrical Engineering 1 or Physics 1C. Introduction to underlying science encompassing structure, properties, and fabrication of technologically important nanoscale sys-
tems. New phenomena that emerge in very small systems (typically with feature sizes below a few hundred nanometers) explore the basic concepts of physics and chemistry. Chemical, optical, and electronic properties, electron transport, structural stability, self-assembly; templated assembly and applications of various materials such as quantum dots, nanoparticles, quantum wires, quantum wells and multilayers, carbon nanotubes. Letter grading.

110. Introduction to 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. Laser method; determination of crystal structures; phase diagram determination; high-resolution X-ray diffraction methods; X-ray spectroscopy and 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, high-resolution X-ray diffraction methods, and special projects. Letter grading.

111. Introduction to Materials Characterization B (Electron Microscopy). (4) Lecture, three hours; laboratory, two hours; outside study, seven hours. Requisites: courses 104, 110. Characterization of microstructure of materials by 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.

C112. Cultural Materials Science II: In Vitro Microscopy and Microanalysis. (4) Lecture, three hours; laboratory, two hours; study, seven hours. Requisites: courses 104, 110 (or Chemistry 113A). Process of extracting and analyzing cultural materials for study of their morphology, microstructure, and composition by applying in vitro optical, chemical, and instrumental methods. Topics include optical and electron microscopy, X-ray and electron spectroscopy, X-ray diffraction, infrared spectroscopy, chemical spot tests, and chromatography. Hands-on experience through object-based problem-solving approach. Practical skills acquired on sampling and sample preparation methods and application on analysis of microparticles and artifacts for characterization of organic and inorganic compounds. Concurrently scheduled with course CM212. Letter grading.

120. Physics of Materials. (4) Lecture, four hours; discussion, three hours; 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, and electrical properties, and p-n junctions. Letter grading.

121. Materials Science of Semiconductors. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisite: course 120. Structure and properties of elemental 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 Semiconductors Laboratory. (2) Lecture, four hours; discussion, three hours; laboratory, two hours; outside study, three hours. Corequisite: course 121. Experiments conducted on materials characterization, including measurements of contact resistance, and thin film bi-axial modulus and CTE. Letter grading.

122. Principles of Electronic Materials Processing. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisite: course 104. Description of basic semiconductor materials for device processing; preparation and characterization of silicon, III-V compounds, and films. Discussion of principles of CVD, MOCVD, LPE, and MBE; metals and dielectrics. Letter grading.

130. Phase Relations in Solids. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisites: course 104, and Chemical Engineering 101. Phase diagrams, equilibria, phase transitions, and crystal structures. Phase diagram determination, transition temperature, and entropy phase diagrams, glass transitions. Letter grading.


131L. Diffusion and Diffusion-Controlled Reactions Laboratory. (2) Laboratory, two hours; outside study, five hours. Requisite: course 131. Design of heat-treating cycles and performing experiments to study interdiffusion, growth of intermediate phases, and grain growth. Letter grading.


133. Ancient and Historic Metals: Technology, Microstructures, and Surface Analysis. (4) Lecture, two hours; laboratory, 90 minutes. Processes of extraction, alloying, surface patination, metallic coatings, corrosion, and microstructure of ancient and historic metals. Techniques used in the past and present to study interdiffusion and phase composition, and applications of these methods. Letter grading.

140. Materials Selection and Engineering Design. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisites: courses 132, 150, 160. Explicit guidance among myriad materials available to the design engineer. Properties and applications of steels, nonferrous alloys, polymeric, ceramic, and composite materials. Selection, treatment, and serviceability emphasized as part of successful design. Project grading. Letter grading.

141L. Computer Methods and Instrumentation in Materials Science. (2) Laboratory, four hours. Preparation: knowledge of BASIC or C or assembly language, and some experience with Science and Engineering interfaces. 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 complex stress conditions and their rate-dependent behavior; dislocations, fracture, microstructural effects, mechanical and thermal treatment of steel for engineering applications. Letter grading.

143L. Mechanical Behavior Laboratory. (2) Laboratory, four hours. Requisite: course 143A. (May be taken concurrently). Methods of characterizing mechanical behavior of various materials; plastic and elastic 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 crystallinity, and morphology and their effects on physical properties. Glassy polymers, spring polymers, elastomers, adhesives. Fiber forming polymers, polymer processing technology, plasticization. Letter grading.


160. Introduction to Ceramics and Glasses. (4) Lecture, four hours; discussion, seven hours. Requisites: courses 104, 130. Introduction to ceramics and glasses being used as important materials of engineering, processing techniques, and unique properties. Examples of design and control of properties for certain specific applications in engineering. Letter grading.


161L. Laboratory in Ceramics. (2) Laboratory, four hours; preparation: at least a C in course 132. Concurrent course 160. Processes of extraction, alloying, surface patination, metallic coatings, corrosion, and microstructure of ancient and historic metals. Techniques used in the past and present to study interdiffusion and phase composition, and applications of these methods. Letter grading.

162. Electron Microscopy. (4) Lecture, four hours; outside study, eight hours. Requisites: course 104, Electrical Engineering 1 (or Physics 1C). Utilization of microscopy in ceramic and thin film technology; high-resolution X-ray spectroscopy; design with ceramics. Letter grading.

163. Ancient and Historic Metals: Technology, Microstructures, and Surface Analysis. (4) Lecture, two hours; laboratory, 90 minutes. Processes of extraction, alloying, surface patination, metallic coatings, corrosion, and microstructure of ancient and historic metals. Techniques used in the past and present to study interdiffusion and phase composition, and applications of these methods. Letter grading.

CM180. Introduction to Biomaterials. (4) (Same as Biomedical Engineering CM180.) Lecture, three hours; discussion, two hours; outside study, seven hours. Requisites: course 104, or 130. Evolution of biomaterials, development of new materials for medical applications and regenerative medicine. Letter grading.
Graduate Courses


211. Electron Microscopy. (4) Lecture, four hours; outside study, eight hours. Requisite: course 111. Essential features of electron microscope, geometry of electron microscope, associated electronic, mechanical, and dynamical theories of electron diffraction, including anomalous absorption, applications of theory to defects in crystals. Moore fringes, direct lattice resolutions, Lorentz microscopy, laboratory applications of contrast theory. Letter grading.

CM212. Cultural Materials Science II: In Vitro Microscopy and Microanalysis. (4) (Same as Conservation M212.) Lecture, three hours; laboratory, two hours. Preparation: general chemistry, or inorganic and organic chemistry. Methodology of sampling and microanalysis of cultural materials for study of their morphological and chemical compositions using techniques in vitro optical, chemical, and instrumental methods. Topics include optical and electron microscopy, X-ray and electron spectroscopy, X-ray diffraction, infrared spectroscopy, chemical spot tests, and chromatography. Hands-on experience through object-based problem-solving approach. Practical skills acquired on sampling and sample preparation methods of cultural materials from thin sections and whole objects using optical instruments for characterization of organic and inorganic compounds. Concurrently scheduled with course C112. Letter grading.

M215. Petrology and Conservation of In-Situ Archaeological and Cultural Materials. (4) (Same as Conservation M236.) Seminar, two hours; laboratory, three hours. Requisite: courses M215 (or Art History M203F or Conservation M250) and M216 (or Conservation M216). Deterioration processes (both natural and man-made) in in-situ and ex-situ archaeological and cultural decorative surfaces (mainly rock art, wall paintings, polychrome sculpture, decorative architectural elements, and mosaics) and on solutions to mitigate, prevent, or arrest decay mechanisms based on nondestructive, preventive, passive, and remedial solutions (latter based on minimum intervention). Sessions include holistic approaches for preservation of archaeological sites; hydrology of sites; origin and damaging effects of salts; biodegradation; chemical and mechanical weathering; earthquakes, frost, flooding, and vandalism; structural repairs, grouting, cleaning, and desalination; sheltering and insulation, long-term fixating, consolidation, and protective surface treatments. Letter grading.

M215. Techniques and Materials of Archaeological and Cultural Materials: In Situ and Ex Situ Architectural Decorative Surfaces. (4) (Same as Art History M203F and Conservation M250.) Seminar, two hours; laboratory, three hours. Requisite: course M216 or C112 or Conservation M210. Recommended: Conservation M215. Recommended for graduate conservation and art history students. Principles of archaeological conservation of in situ and ex situ monumental archaeological and cultural materials, with focus on rock art, wall paintings, decorative architectural elements, and mosaics, through study of their constituent materials and techniques in context of their geographical and chronological occurrence, technological development, and conservation history, and physical location. Lectures, seminars, and case-study presentations, museum and site visits, hands-on laboratory experience, and independent research that incorporates literary survey of archaeological and cultural materials and their aging characteristics. Science and application methods of traditional organic and inorganic systems and introduction of novel technology based on biomimetic processes and nanostructured materials. Letter grading.

221. Science of Electronic Materials. (4) Lecture, four hours; outside study, eight hours. Requisite: course 144. Introduction to physical, chemical, and mechanical properties of conservation materials (employed for preservation of archaeological and cultural materials) and their aging characteristics. Science and application methods of traditional organic and inorganic systems and introduction of novel technology based on biomimetic processes and nanostructured materials. Letter grading.

222. Growth and Processing 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, carrier statistics, band-gap engineering, optical and transport properties, novel materials systems, and characterization. Letter grading.

223. Materials Science of Thin Films. (4) Lecture, four hours; outside study, eight hours. Requisites: courses 120, 130, 131. Thermodynamics and kinetics that affect semiconductor growth and device processing. Special emphasis on fundamentals of growth (bulk and epitaxial), heteroepitaxy, implantation, oxidation, and etching. Letter grading.

224. Deposition Technologies and Their Applications. (4) Lecture, four hours; outside study, eight hours. Examination of physics behind majority of modern thin film deposition technologies based on vapor phase transport, chemical vapor deposition (CVD), plasma enhanced chemical vapor deposition processes. Letter grading.


226. Si-CMOS Technology: Selected Topics in Materials Science. (4) Lecture, three hours; discussion, one hour; outside study, eight hours. Recommended preparation: Electrical Engineering 221B. Requisites: courses M214, 131, 120, M221, and 222. Selected topics in materials science from modern Si-CMOS technology, including technological challenges in high k/metal gate stacks, strained FETs, SOI and bulk technologies, FETs, source/drain engineering including transient-enhanced diffusion, nonvolatile memory, and metallization for ohmic contacts. Letter grading.


243A. Fracture of Structural Materials. (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.


250B. Advanced Composite Materials. (4) Lecture, four hours; outside study, eight hours. Preparation: B.S. in Materials Science and Engineering. Requisite: course 151. Fabrication methods, structure, and properties of advanced composite materials. Fiber, resin-


252. Organic Polymer Electronic Materials. (4) Lecture, four hours; outside study, eight hours. Preparation: knowledge of introductory organic chemistry and polymer science. Introduction to organic electronic materials with emphasis on materials chemistry and processing. Topics include conjugated polymers; highly doped, highly conducting polymers; applications as processable metals and in various electrical, optical, and electrochemical devices. Synthesis of semiconductor polymers for organic light-emitting diodes, solar cells, thin-film transistors. Introduction to emerging field of electronic organic. Letter grading.

270. Computer Simulations of Materials. (4) Lecture, four hours; outside study, eight hours. Introduction to modern methods of computational modeling in materials science. Topics include basic statistical mechanics, classical molecular dynamics, and Monte Carlo methods, with emphasis on understanding basic physical ideas and learning to design, run, and analyze computer simulations. Use of examples from current literature to show how these methods can be used to study interesting phenomena in materials science. Hands-on computer experiments. Letter grading.

271. Electronic Structure of Materials. (4) Lecture, four hours; outside study, eight hours. Preparation: basic knowledge of quantum mechanics. Recommended requisite: course 200. Introduction to modern first-principles electronic structure calculations for various types of modern materials. Properties of electrons and interatomic bonding in molecules, crystals, and liquids, with emphasis on practical methods for solving Schrödinger equation and using it to calculate physical properties such as elastic constants, equilibrium structures, binding energies, vibrational frequencies, electronic band gaps and band structures, properties of defects, surfaces, interfaces, and magnetism. Extensive hands-on experience with modern density-functional theory code. Letter grading.

272. Theory of Nanomaterials. (4) Lecture, four hours; outside study, eight hours. Strongly recommended requisite: course 200. Introduction to properties and applications of nanoscale materials, with emphasis on understanding of basic principles that distinguish nanoscale structures (with feature size below 100 nm) from more common micro-structured materials. Exploration of new phenomena that emerge only in very small systems, using simple concepts from quantum mechanics and thermodynamics. Topics include structure and electronic properties of quantum dots, wires, nanotubes, and multilayers, self-assembly on surfaces and in liquid solutions, mechanical properties of nanostructured metamaterials, molecular electronics, spin-based electronics, and proposed realizations of quantum computing. Discussion of current and future directions of this rapidly growing field using examples from modern scientific literature. Letter grading.

CM280. Introduction to Biomaterials. (4) Same as Biomedical Engineering CM280. Lecture, three hours; discussion, two hours; outside study, seven hours. Requisite: courses 104, or Chemistry 20A, 20B, and 20L. 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 CM180. Letter grading.

282. Exploration of Advanced Topics in Materials Science and Engineering. (2) Lecture, one hour; discussion, one hour; outside study, four hours. Researchers from leading research institutions around world deliver lectures on advanced research topics in materials science and engineering. Student groups present summaries of topics prior to lecture. Class discussions follow each presentation. May be repeated for credit. S/U grading.

296. Seminar: Advanced Topics in Materials Science and Engineering. (2) Seminar, two hours; outside study, four hours. Advanced study and analysis of current topics in materials science and engineering. Discussion of current research and literature in research specialty of faculty members teaching course. May be repeated for credit. S/U 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 course is over-subscribed, any elective 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. 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 M.S. Comprehensive Examination. (2 to 12) Tutorial, to be arranged. Limited to graduate materials science and engineering students. Reading and preparation for M.S. comprehensive examination. S/U grading.

597B. Preparation for Ph.D. Preliminary Examination. (2 to 16) Tutorial, to be arranged. Limited to graduate materials science and engineering students. S/U grading.

597C. Preparation for Ph.D. 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 and Preparation of Ph.D. 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

UCLA

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Murray M. Schacher, Ph.D.
Roberto H. Schonmann, Ph.D.
Robert Steinberg, Ph.D.
Masamichi Takesaki, Ph.D.
James H. White, Ph.D.
N. Donald Ylvisaker, Ph.D.
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 provides 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

Admission

Students entering UCLA directly from high school who declare one of the five mathematics majors offered by the department at the time they apply for admission are automatically admitted to that major.

UCLA students who wish to enter one of the mathematics majors must have a minimum grade of C– in each preparation for the major course completed and a combined grade-point average of at least 2.0 in those courses. Grades in any completed major courses must also average at least 2.0. Students with 60 or more units of credit must have completed at least 12 units of calculus to enter any of the mathematics majors.

Transfer students must have a minimum grade of C in the equivalent of each preparation for the major course completed. Those transferring with 60 or more quarter units of credit must have completed at least 12 quarter units of calculus to enter any of the Mathematics Department majors.

Preliminary Examination in Mathematics

If students wish to enroll in Mathematics 1, 3A, or 31A, they must pass the Mathematics Diagnostic Test. The examination may be taken at any one of several times, including all sessions of the New Student Orientation program. It is also given several times during the academic year. For specific dates and test locations, refer to the Schedule of Classes or the departmental website at http://www.math.ucla.edu/ugrad/diagnostic.shtml, or contact the Mathematics Student Services Office, 6356 Math Sciences.

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 a broad, general introduction to the topic of computing 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, 20A, 20B, 20C, 30, 40A, 40B, and 60 are of interest to Letters and Science majors who are completing a specialization in Computing or who are planning to take upper division courses in computer science. These students should seek the advice of their major department.

Undergraduate Majors

The department offers five majors: Mathematics, Applied 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 mathematics; the Applied Mathematics major for those interested in the classical relationship between mathematics, the physical sciences, and engineering; 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 actuarial science, 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.

Mathematics B.S.

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, 32, Physics 1B, 1C, 6B, 6C. Each course must be passed with a minimum grade of C–, and students must have a minimum overall grade-point average of 2.0 for the courses.
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 at http://www.admissions.ucla.edu/prospect/adm_tr.htm for up-to-date information regarding transfer selection for admission.

The Major

Required: Mathematics 110A, 110B, 115A, 120A, 131A, 131B, 132, and at least five elective courses from 106 through 199 and Statistics 100A through 102C. The 12 courses must be passed with a minimum overall grade-point average of 2.0.

Applied Mathematics B.S.

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 passed with a minimum grade of C–, and students must have a minimum overall grade-point average of 2.0 for the courses.

Transfer Students
Transfer applicants to the Applied 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, two calculus-based physics courses, one C++ programming course, and one course from general chemistry for majors or calculus-based physics.

Refer to the UCLA Transfer Admission Guide at http://www.admissions.ucla.edu/prospect/adm_tr.htm for up-to-date information regarding transfer selection for admission.

The Major

Required: Mathematics 115A, 131A, 131B or 132, 151A, 151B, and six courses from 106 through 199 and Statistics 100A through 101C; three upper division computer science courses (12 units). The 14 courses must be passed with a minimum overall grade-point average of 2.0.

Mathematics of Computation B.S.

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 passed with a minimum grade of C–, and students must have a minimum overall grade-point average of 2.0 for the courses.

Transfer Students
Transfer applicants to the Mathematics of Computation 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 discrete structures course, two calculus-based physics courses, three programming courses, and one course from general chemistry for majors or calculus-based physics.

Refer to the UCLA Transfer Admission Guide at http://www.admissions.ucla.edu/prospect/adm_tr.htm for up-to-date information regarding transfer selection for admission.

The Major

Required: Eleven Mathematics Department courses, including Mathematics 115A, 131A, 131B or 132, 151A, 151B, and six courses from 106 through 199 and Statistics 100A through 101C; three upper division computer science courses (12 units). The 14 courses must be passed with a minimum overall grade-point average of 2.0.

Mathematics/ Applied Science B.S.

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 advisor, design their own program. They may also select one of the established programs: actuarial plan, 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 Math 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.

Preparation for the Major

Required: Mathematics 31A, 31B, 32A, 32B, 33A, 33B, Program in Computing 10A. Each course must be passed with a minimum grade of C–, and students must have a minimum overall grade-point average of 2.0 for the courses.

Additional preparation, varying with the individual program, may be required.

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 at http://www.admissions.ucla.edu/prospect/adm_tr.htm for up-to-date information regarding transfer selection for admission.

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. The seven Mathematics Department courses must be passed with an overall grade-point average of 2.0, as must the seven courses outside mathematics.

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 time they plan to enter the program.

Actuarial Plan

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 (Mathematics 31A, 31B, Economics 1, 2, and 11) are calculated separately from the mathematics preparation for the major courses (Mathematics 32A, 32B, 33A, 33B, and Program in Computing 10A). The economics preparation courses must be completed with a minimum overall 2.5 grade-point average and a C or better in each course. The mathematics preparation courses must be completed with a minimum overall 2.0 grade-point average and a C– or better in each course.

Repetition of more than one economics preparation course or of any economics preparation course more than once results in automatic dismissal from the major.

The Major

Required: Eight mathematics courses, including Mathematics 115A, 131A, 131B, 170A, 170B, 172A, 172B, 172C, 174; three outside courses, including Statistics 100B, 100C, and one course from Economics 101 through 199B. Each course must be taken for a letter grade. Transfer credit is subject to department approval; consult an undergraduate counselor before enrolling in any courses for the major.

To graduate, the eight Mathematics Department courses must be passed with an overall grade-point average of 2.0, as must the three courses from the Economics and Statistics Departments.
Mathematics/History of Science Plan

Preparation for the Major

Required: Mathematics 31A, 31B, 32A, 32B, 33A, 33B, Program in Computing 10A, and three courses from History 2B, 2D, 3A through 3D.

The Major

Required: Eight mathematics courses, including Mathematics 106, 115A, 131A, 134, 170A, and three courses from 110A through 199; six outside courses to be selected from History 179A through 180C, Philosophy 124, Physiological Science M168, and any upper division Honors Collegium course with history of science/medicine content.

Medical and Life Sciences Plan

Preparation for the Major


The Major

Required: Seven mathematics courses, including Mathematics 115A, 134, 151A, 170A, 170B, and two courses from 110A through 199 and Statistics 100B through 101C; six outside courses, including Neuroscience M101A, M101B, and M101C, and three courses from Biomathematics 110, 160, Biostatistics 100A, Chemistry and Biochemistry CM160A, Computer Science CM186, Ecology and Evolutionary Biology C119, 133, 135, Physiological Science 100, 135, and any additional upper division course from these fields with consent of the administering department and the Mathematics Department.

Mathematics for Teaching B.S.

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.

Preparation for the Major

Required: Mathematics 31A, 31B, 32A, 32B, 33A, 33B, 61, Physics 1A or 6A, Program in Computing 10A, and two courses from Chemistry and Biochemistry 20A, 20B, Physics 1B, 1C, 6B, 6C, Program in Computing 10B through 97. Each course must be passed with a minimum grade of C–, and students must have a minimum overall grade-point average of 2.0 for the courses.

Transfer Students

Transfer applicants to the Mathematics for Teaching 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 discrete structures course, one C++ program, and three courses from calculus-based physics, general chemistry for majors, and computing.

Refer to the UCLA Transfer Admission Guide at http://www.admissions.ucla.edu/prospect/adm_tr.htm for up-to-date information regarding transfer selection for admission.

The Major

Required: Mathematics 105A, 105B, 105C, 106, 110A or 117, 115A, 120A or 123, 131A, 170A or Statistics 100A, Statistics 100B, one course from Mathematics 110B through 191H or Statistics 100C, one course from Mathematics 131B through 136, one course from 142 through 167.

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. Consult the department for further information.

Computing Specialization

Majors in Mathematics, Applied Mathematics, Mathematics/Appplied 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 160. Program in Computing 10A, 10B, two courses from 10C; 15, 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, consult the Department of Education 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 an overall grade-point average of 2.0 or better and meet with the undergraduate mathematics adviser in the Student Services Office, 6356 Math Sciences.

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.

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, http://www.gdnets.ucla.edu/gasaa/library/pgmrqintro.htm. 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 (M.A.T.) degree and Master of Arts (M.A.), Candidate in Philosophy (C.Phil.), and Doctor of Philosophy (Ph.D.) degrees in Mathematics.

Mathematics

Lower Division Courses

1. Precalculus. (4) Lecture, three hours; discussion, one hour. Preparation: three years of high school mathematics. Prerequisite: successful completion of Mathematics Diagnostic Test. Function concept, Linear and polynomial functions and their graphs, applications to optimization. Inverse, exponential, and logarithmic functions. Trigonometric functions. P/NP or letter grading.
2. Finite Mathematics. (4) Lecture, three hours; discussion, one hour. Preparation: three years of high school mathematics consisting of algebra, matrices, Gauss/Jordan method, combinatorics, probability, Bayes theorem, and Markov chains. P/NP or letter grading.

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). Requisite: successful completion of Mathematics Diagnostic Test (score of 36 or better) or course 1 with a grade of C– or better. Not open for credit to students with credit in another calculus sequence. Techniques and applications of differential calculus. P/NP or letter grading.

3B. Calculus for Life Sciences Students. (4) Lecture, three hours; discussion, one hour. Requisite: course 3A with a grade of C– or better. Not open for credit to students with credit for course 31B. Techniques and applications of integral calculus, introduction to differential equations and multivariable differential calculus. P/NP or letter grading.

3C. Probability for Life Sciences Students. (4) Lecture, three hours; discussion, one hour. Requisite: course 3B with grade of C– or better. Elementary probability, probability distributions, random variables, and limit theorems. P/NP or letter grading.

31A. Differential and Integral Calculus. (4) Lecture, three hours; discussion, one hour. Preparation: three and one-half years of high school mathematics (including some coordinate geometry and trigonometry). Requisite: successful completion of Mathematics Diagnostic Test (score of 36 or better) or a grade of C– or better. Differential calculus and applications; introduction to differential equations and multivariable differential calculus. 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 courses 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. Requisite: course 31A with a 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 for 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 requisites: courses 31A 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, matrices, matrix algebra, linear independence, subspaces, bases and dimension, orthogonality, least-squares meters consisting, 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, 4) Lecture, three hours; discussion, one hour. Enforced requisite: course 31B with grade of C– or better. Highly recommended: course 33A. First-order, linear differential equations; second-order, linear differential equations with constant coefficients, easier and learning differences in 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. Corequisites: courses 31A, 31B, 32A, 32B, 33A, 33B. Not open for credit to students with credit for course 180 or former course 113. Discrete structures commonly used in computer science and mathematics: logic, set theory, number representations, permutations and combinations, graphs and trees, induction, Boolean algebras. 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. Introduction to inquiry-based learning practices, national and California standards, assessment, grading, and research-based pedagogy needed for teaching key mathematics topics in middle school. P/NP grading.

72SL. Classroom Practices in Middle School Mathematics. (2) Seminar, 90 minutes; fieldwork, 90 minutes. Introduction to professional standards and current research for teaching middle school mathematics. May be taken independently for credit. P/NP or letter grading.

103A. Mathematics and Pedagogy for Teaching Middle School Mathematics. (2) Seminar, 90 minutes; fieldwork, 90 minutes. Requirements: courses 31A, 31B, 32A, 33A, 33B, with grades of C– or better. Mathematical knowledge and research-based pedagogy needed for teaching key number topics in middle school. Introduction to professional standards and current research for teaching middle school mathematics. May be taken independently for credit. P/NP or letter grading.

103C. Mathematics and Pedagogy for Teaching Secondary School Mathematics. (2) Seminar, 90 minutes; fieldwork, 90 minutes. Requirements: courses 31A, 31B, 32A, 33A, 33B, with grades of C– or better. Mathematical knowledge and research-based pedagogy needed for teaching key topics in middle school. Introduction to professional standards and current research for teaching middle school mathematics. May be taken independently for credit. P/NP or letter grading.

105A. Mathematics and Pedagogy for Teaching Secondary School Mathematics. (4) Lecture, four hours; fieldwork, 30 minutes. Corequisites: courses 101A (or 110) or 117, 120A (or 123) and 131A, with grades of C– or better. Course 105A is requisite to 105B, 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.

105B. 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 topics in secondary school; professional standards and current research for teaching secondary school mathematics. Letter grading.

Upper Division Courses

General and Teacher Training

100. Problem Solving. (4) Formerly numbered 192.) Lecture, three hours. Requisite: course 31A with grade of C– or better. Problem-solving techniques and mathematical topics useful as preparation for Putnam Examination and similar competitions. Continued fractions, inequalities, modular arithmetic, closed form evaluations, sums and products, combinatorial geometry, rational functions and polynomials, other nonroutine problems. Participants expected to take Putnam Examination. P/NP grading.

103A-103B-103C. Observation and Participation: Mathematics Instruction. (2-2-2) Formerly numbered 330.) Seminar, one hour; fieldwork (classroom observation and participation), two hours. Requisites: courses 31A, 31B, 32A, 33A, 33B. Course 103A is enforced requisite to 103B, which is enforced requisite to 103C. Observation, participation, or tutoring in mathematics classes at middle school and secondary levels. May be repeated for credit. P/NP (undergraduates) or S/U (graduate students).

103A. Mathematics and Pedagogy for Teaching Middle School Mathematics. (2) Seminar, 90 minutes; fieldwork, 90 minutes. Requisites: courses 31A, 31B, 32A, 33A, 33B, with grades of C– or better. Mathematical knowledge and research-based pedagogy needed for teaching key number topics in middle school. Introduction to professional standards and current research for teaching middle school mathematics. May be taken independently for credit. P/NP or letter grading.

103B. Mathematics and Pedagogy for Teaching Middle School Mathematics. (2) Seminar, 90 minutes; fieldwork, 90 minutes. Requisites: courses 31A, 31B, 32A, 33A, 33B, with grades of C– or better. Mathematical knowledge and research-based pedagogy needed for teaching key topics in middle school. Introduction to professional standards and current research for teaching middle school mathematics. May be taken independently for credit. P/NP or letter grading.

105A. Mathematics and Pedagogy for Teaching Secondary School Mathematics. (4) Lecture, four hours; fieldwork, 30 minutes. Requisites: courses 101A (or 110) or 117, 120A (or 123), and 131A, with grades of C– or better. Course 105A is requisite to 105B, 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.

105B. 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 topics in secondary school; professional standards and current research for teaching secondary school mathematics. Letter grading.

105C. 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 topics in secondary school; professional standards and current research for teaching secondary school mathematics. Letter grading.
106. History of Mathematics. (4) Lecture, three hours; discussion, one hour. Requisites: courses 31A, 31B, 32A. Roots of modern mathematics in ancient Babylonia and Greece, including place value number system; development of algebra 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. (4-4) Lecture, three hours; discussion, one hour. Honors sequence parallel to courses 110A, 110B.

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, 115A. Divisibility, congruences, Diophantine analysis, selected topics in theory of primes, algebraic number theory, Diophantine equations.

114C. Computability Theory. (4) (Formerly numbered 114A.) Lecture, three hours; discussion, one hour. Requisite: course 110A or 113A or Philosophy 135. Effectively calculable, 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. Algorithmic 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 Gödel. Propositional and predicate logic; syntax and semantics; formal deduction; completeness, compactness, and Lowenheim/Skolem theorem. Formal number theory; nonstandard models; Gödel incompleteness theorem. P/NP or letter grading.

M114S. Introduction to Set Theory. (4) (Same as Philosophy 113S.) Lecture, three hours; discussion, one hour. Requisite: course 110A or 131A or Philosophy 135. Axiomatic set theory as framework for mathematical concepts; relations and functions, numbers, cardinality, axiom of choice, transfinite numbers. P/NP or letter grading.

115A-115B. Linear Algebra. (5-4) 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; eigenvalue theory. 115B. Lecture, three hours; discussion, one hour. Requisite: course 115A. Linear transformations, conjugate spaces, duality; theory of a single linear transformation, Jordan normal form; bilinear forms, quadratic forms; Euclidean and unitary spaces, symmetrical, skew-symmetrical, and orthogonal linear transformations, polar decomposition.

115AH. Linear Algebra (Honors). (5) Lecture, three hours; discussion, two hours. Requisite: course 33A with a grade 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 techniques and applications 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 Program in Computing 116. Introduction to mathematical cryp-
tology using methods of number theory, algebra, probability. Topics include symmetric and public-key cryptographic systems, one-way functions, signatures, key exchange, groups, primes, pseudoprimes, primarily the Fermat and quadratic reciprocity theorems, 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 1110A. 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, 115A, 115B. Course 120A is required to be followed by 120B. Curves in 3-space, Frenet formulas, surfaces in 3-space, normal curvature, Gaussian curvature, congruence of curves and surfaces, intrinsic geometry of surfaces, isometric geometry, Gauss/Bonnet theorem, P/NP or letter grading.

121. Introduction to Topology. (4) Requisite: course 113A. Metric and topological spaces, completeness, connectedness, functions, continuity, homeomorphisms, topological properties.

123. Foundations of Geometry. (4) Lecture, three hours; discussion, one hour. Requisite: course 115A. Axioms and models, Euclidean geometry, Hilbert axioms, neutral (absolute) geometry, hyperbolic geometry, Poincaré 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. Requisites for course 131AH: courses 32B and 33B, with grades of B or better. Requisites for course 131BH: sequences 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. (4) 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.


136. Partial Differential Equations. (4) Lecture, three hours; discussion, one hour. Requisites: courses 33A, 33B. Linear partial differential equations, boundary and initial value problems; wave equation, heat equation, and 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 32B, 33B. Foundations of Newtonian mechanics, kinematics and dynamics of a rigid body, variational 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. Requisites: courses 32B, 33B. Central themes for the course include: asymptotic analysis, integral transforms, Green's functions, and calculus of variations. Selected applications from control theory, optics, dynamical systems, and other engineering problems.


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167. Mathematical Game Theory. (4) Lecture, three hours; discussion, one hour. Requisite: course 115C. Quantitative modeling of strategic interaction. Topics include extensive and normal form games, background probability, lotteries, mixed strategies, pure and mixed Nash equilibria, strategic form games, bargaining: emphasis on economic examples. Optional topics include repeated games and evolutionary game theory. P/NP or letter grading.


170B. Probability Theory. (4) Lecture, three hours; discussion, one hour. Requisite: course 170A or Statistics 100A or 110A. Probability distributions, random variables and vectors, expectation. P/NP or letter grading.

171. Stochastic Processes. (4) Lecture, three hours; discussion, one hour. Requisites: courses 33A, 170A (or Statistics 100A or 110A). Markov chains, continuous-time Markov chains, renewal theory. P/NP or letter grading.

172A. Introduction to Financial Mathematics. (4) Lecture, four hours. Requisites: courses 32B, 33B. Designed to provide understanding of fundamental concepts of financial mathematics and how those concepts are applied in calculating present and accumulated values from various streams of cash flows as basis for future use in reserving, valuation, pricing as well as for the mathematical management of investment, income capital budgeting, and valuing contingent cash flows. Letter grading.

172B. Actuarial Models I. (4) Lecture, four hours. Requisites: courses 170A and 170B (or Statistics 100A and 100B). Designed to provide understanding of the theoretical basis of certain actuarial models and application of those models to insurance, pensions, and other financial risks. Letter grading.

172C. Actuarial Models II. (4) Lecture, four hours. Requisite: course 172B. Theoretical basis of certain actuarial models and application to insurance, pensions, and other financial risks. Letter grading.


173B. Casualty Loss Models II. (4) Lecture, four hours. Enforced requisite: course 173A. Construction of parametric 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.


Discrete Mathematics

180. Combinatorics. (4) (Formerly numbered 113.) Lecture, three hours; discussion, one hour. Enforced requisites: courses 32B, 33B. Permutations and combinations; generating functions, combinatorial designs, graphs and trees, with applications including games of complete information. Combinatorial existence theorems, Ramsey theorem. P/NP or letter grading.

182. Algorithms. (4) Lecture, three hours; discussion, one hour. Requisite: course 3C or 32A. Graphs, greedy algorithms, divide and conquer algorithms, dynamic programming, network flow. Emphasis on design of efficient algorithms useful in diverse areas such as bioinformatics and allocation of resources. P/NP or letter grading.

184. Topics in Combinatorics. (4) Lecture, three hours; discussion, one hour. Requisites: courses 61 (or 180), 115A. Introduction to combinatorics, including several independent topics selected to illustrate various techniques to obtain combinatorial results. Gems of modern combinatorics to be showcased. May be re-peated for credit. P/NP or letter grading.

Special Studies

190A-190O. Seminars: Current Literature. (1 each) Seminar, one hour. Designed for undergraduate students. Readings and presentations of papers in mathematical literature under supervision of staff member. One-hour presentation required. P/NP grading.

190A. Number and History of Development of Mathematics.
190B. Algebra.
190C. Geometry.
190D. Logic.
190E. Topology.
190F. Analysis.
190H. Differential Equations.
190I. Functional Analysis.
190J. Applied Mathematics.
190K. Probability.
190L. Dynamical Systems.
190M. Mathematics.
190N. Combinatorics.
190O. Cryptography.

191. Variable Topics Research Seminars: Mathematics. (4) Seminar, three hours. Variable topics research course in mathematics that covers material not covered in regular mathematics upper division curricu-lum. Reading, discussion, and development of culmi-nating project. May be repeated for credit with topic and/or instructor change. P/NP or letter grading.

191H. Honors Research Seminars: Mathematics. (4) Seminar, three hours; discussion. May be applied toward upper division credit. Additional 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 Educa-tion. (4) Tutorial, to be arranged. Limited to juniors/ seniors. Internship to be supervised by Center for Community Learning and Mathematics Department. Students meet on a 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 applied 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. At discretion of chair and subject to availability of resources. Individual intensive study of topics suitable for undergraduate course credit but not specifically offered as separate courses. Scheduled meetings to be arranged between faculty member and student. Approval of 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.

199. Directed Research or Senior Project in Mathe-matics. (2 or 4) Tutorial, three hours per week per unit. Limited to juniors/seniors. Supervised individual research under guidance of faculty mentor. Scheduled 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.

Graduate Courses

Teacher Preparation

201A-201B. 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 M.A. degree requirements.

202A-202B. Mathematical Models and Applica-tions. (4-4) Preparation: bachelor's degree in mathe-matics. 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 M.A. 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. Preparation for linear algebra portion of UCLA Mathemat-ics Basic Examination that is required of M.A. and Ph.D. students. S/U or letter grading.

204. Master's Analysis. (4) Lecture, four hours; dis-cussion, one hour. Rigorous treatment of fundamental results of analysis. Applications to contemporary re-search. Preparation for analysis portion of UCLA Mathemat-ics Basic Examination that is required of M.A. and Ph.D. 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, lo-cal and global fields, 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. Adele analysis on GL(1) and GL(2), especially Hecke and Hecke theory, automorphic representations. Special values of L-functions and p-adic L-functions, arithmetic theory of modular forms, advanced topics in analytic number theory. Artin reciprocity, especially of modular curves. S/U or letter grading.


M209A. Cryptography. (4) (Same as Computer Science M224A.) Lecture, four hours. Requisite: course M209A. Consideration of advanced cryptographic protocol design and analysis. Topics include non-malleable and 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 multi-party computation; dealing with dynamic adversary; non-malleability and composability of secure protocols; software protection; threshold cryptography; identity-based cryptography; private information retrieval; protection against man-in-the-middle attacks; voting protocols; identification protocols; digital cash schemes; lower bounds on use of cryptographic primitives, software obfuscation. May be repeated for credit. S/U or letter grading.

210A-210B-210C. Algebra. (4-4-4) Requisites: courses 110A, 110B, 110C. Students with credit for courses 110B and/or 210B receive M.A. credit only for courses 210B and/or 210C. Group theory, including theories of Sylow and Jordan/Holder/Schreier; rings and ideals, factorization theory in integral domains. 210A covers 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 principal rings, rings and algebras with minimum condition.

212. Homological Algebra. (4) Requisite: course 210A. Modules over a ring, homomorphisms and tensor products of modules, functors and derived functors, homological algebra in triangulated categories.

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, and free groups and Hecke algebras.

214A-214B. Introduction to Algebraic Geometry. (4-4) Requisite: course 210A. Basic definitions and first properties of algebraic varieties in affine and projective space: irreducibility, dimension, singular and smooth points. More advanced topics, such as sheaves and their cohomology, or introduction to theory of Riemann surfaces, as time permits.


216. Further Topics in Algebraic Geometry. (4) Requisites: courses 214A, 214B. Closer examination of areas of current research in algebraic geometry. Variable content may include algebraic surfaces, Abelian varieties, invariant theory, Hodge theory, or geometry over finite fields. May be repeated for credit by petition.

M217. Geometry and Physics. (4) (Same as Physics M236.) Lecture, three hours. Interdisciplinary course on topics at interface between physics quantum fields and superstrings and mathematics of differential and algebraic geometry. Topics include supersymmetry, index theory, Seiberg/Witten theory, conformal field theory, Calabi-Yau manifolds, mirror symmetry and duality, integrable systems. S/U grading.


218B. Discrete Mathematics: Algebraic Methods. (4) (Formerly numbered 218.) Lecture, three hours. Basic algebraic methods in combinatorics and tensor product methods, eigenvalues of graphs and their application, combinatorial Nullstellensatz and Chevalley/Warning Theorem. Example to Bollobas construction of a chromatic number of unit circle graph of Euclidean space, explicit constructions of Ramsey graphs, other topics. S/U or letter grading.

218C. Topics in Discrete Mathematics. (4) Lecture, three hours. Examination of variety of methods, approaches, and techniques that were developed in last 30 years in discrete mathematics. Topics may include extremal problems for graphs and set systems, Ramsey theory, additive number theory combinatorial geometry, topological methods in combinatorics, entropy and other tools from information theory, discrete harmonic analysis and its applications to combinatorics and the theory of Banach spaces. Topics vary from year to year. May be repeated for credit with consent of instructor. S/U or letter grading.

Logic and Foundations

220A-220B-220C. Mathematical Logic. (4-4-4) Lecture, three hours. Requisite: course M114S. Fundamental methods and results in mathematical logic, using mathematical methods to reason about existence or nonexistence of proofs and computations in many different settings. Topics include compactness theorem, saturation of models, completeness and incompleteness of first-order theories, undecidability of arithmetic in models and degrees of unsolvability, recursion in Baire space, Zermelo/Fraenkel axioms, universe of constructible sets, and theories of the universe. S/U grading.

221A. Generalized Descriptive Set Theory. (4) Lecture, three hours. Preparation: knowledge of basic theory of topology and measure theory, of sections of real analysis. Topics include theorems, enriched languages, soft model theory, and simplicial homology. S/U or letter grading.

221B. Topics in Descriptive Set Theory. (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, Lefshetz fixed-point theorem, Euler characteristic, Ehresmann theorem that proper submersions are locally trivial fibrations. S/U or letter grading.

225A. Algebraic Topology. (4) Lecture, three hours. Topology, homotopy, homology, and covering spaces, singular homology and cohomology theory, axioms of homotopy theory, Mayer/Vietoris sequence, Poincare duality, Thom isomorphism, characteristic classes, Thom spaces, fibrations revisited from viewpoint of de Rham cohomology, Riemannian metrics, gradient, volume forms, and interpretation of classical integral theorems as aspects of de Rham theory for differential forms. S/U or letter grading.

225B. Algebraic Topology. (4) Lecture, three hours. Topics may include homology theory and characteristic classes, homology and cohomology of standard spaces, cell complexes and cellular homology, de Rham theorem on isomorphism of de Rham differential-form cohomology and singular cohomology with real coefficients. S/U or letter grading.

225C. Algebraic Topology. (4) Lecture, three hours. Discussion, one hour. Basic concepts of homotopy theory and fundamental groups, covering spaces, singular homology and cohomology theory, axioms of homotopy theory, Mayer/Vietoris sequence, calculation of homology and cohomology of standard spaces, cell complexes and cellular homology, de Rham theory on isomorphism of de Rham differential-form cohomology and singular cohomology with real coefficients. S/U or letter grading.

226A-226B. Differential Geometry. (4-4-4) Lecture, three hours. Requisite: course 225A. Manifold theory; connections, curvature, torsion, and parallelism. Riemannian manifolds; completeness, submanifolds, current curvature. Geodesics, conjugate points, variational methods, Myers theorem, nonpositive curvature. Further topics such as pinched manifolds, integral geometry, Kahler manifolds, symplectic spaces.


233. Partial Differential Equations on Manifolds. (4) Lecture, three hours. Requisites: courses 226A, 251A. Topics may include Lagrangian operator on a Riemannian manifold, eigenvalues, Atiyah/Singer index theorem, heat kernel and asymptotic expansion, harmonic functions, function theory on manifolds, Green's function, heat equation, minimal hypersurfaces, hyperbolic equations, wave equations, analytic solutions.

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 con-
verge 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.

235. Topics in Manifold Theory. (4) Lecture, three hours. Requisites: courses 225A, 225B. Emphasis on low-dimensional manifolds. Structure and classification of manifolds, automorphisms of manifolds, submanifolds (e.g., knots and links). Topics vary from year to year. May be repeated for credit by petition.

236. Topology. (4) Lecture, three hours. Requisites: courses 225A, 225B. Decomposition spaces, surgery 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. Requisites: course 246A. Preparation: prior graduate preparation in one-year analysis courses. Topics include qualitative theory of differential equations, bifurcation theory, and Hamiltonian systems; differential dynamics, including hyperbolic theory and quasiperiodic dynamics; ergodic theory; low-dimensional dynamics. S/U or letter grading.

Analysis and Differential 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 vary from year to year. May be repeated for credit by petition.

Functional Analysis


255B-255C. Topics in Functional Analysis. (4-4) Requisites: course 255A. Topics include Banach algebras, operators on Banach spaces and Hilbert spaces, semigroups of operators, linear topological vector spaces, and other related areas.

256A-256B. Topological Groups and Their Representations. (4-4) Lecture, three hours. Requisites: course 255A. Topological groups and their basic properties; Peter-Weyl theorem; their representations. Duality and Fourier analysis on locally compact abelian groups. Induced representations, Pontryagin duality. Representations of special groups, e.g., Lorentz, Galilean, etc.; Projective representations. Representations of totally disconnected groups. S/U or letter grading.


Applied Mathematics


266D-266E. Applied Differential Equations. (4) Requisites: courses 265A, 265B. Topics in linear and nonlinear partial differential equations, with emphasis on energy estimates, numerical methods, and applications to fluid mechanics. Additional topics include dispersive waves, reaction-diffusion problems, and applications to fluid mechanics.


270B-270C. Computational Linear Algebra. (4-4) Lecture, three hours. Requisites: courses 115A, 151A, 151B, Program in Computing 10A. Direct, fast, and it-
erative algorithms, overdetermined systems; singular value decomposition, regularization, sparse systems, algebraic approach to problems. 


271A. Tensor Analysis. (4) Requisite: course 131A. Algebra and calculus of tensors on n-dimensional manifolds. Curvilinear coordinates and coordinate-free methods. Covariant differentiation. Green/Stokes theorems for differential forms. Applications to topics such as continuum and particle mechanics.


Probability and Statistics

275A-275B. Probability Theory. (4-4) Requisite: course 245A or 265A. Connection between probability theory and real analysis. Weak and strong laws of large numbers, central limit theorem, conditioning, ergodic theory, martingale theory.


275E. Stochastic Particle Systems. (4) Lecture, three hours. Requisite: course 275C. Interacting particle systems, including contact process, stochastic ising model, and exclusion processes; percolation theory, S/U or letter grading.

Special Studies

285A-285N. Seminars. (4 each) Seminar, three hours. No more than two 285 courses may be applied toward M.A. degree requirements except by prior consent of graduate chair. Topics in various branches of mathematics and their applications by means of lectures and informal conferences with staff members. S/U or letter grading.

285A. History and Development of Mathematics.
285B. Number Theory.
285C. Algebra.
285D. Logic.
285E. Geometry.
285F. Topology.
285G. Analysis.
285H. Differential Equations.
285I. Functional Analysis.
285K. Probability.
285L. Dynamical Systems.
285M. Combinatorics.


290A. History and Development of Mathematics.
290B. Number Theory.
290C. Algebra.
290D. Logic.
290E. Geometry.
290F. Topology.
290G. Analysis.
290H. Differential Equations.
290I. Functional Analysis.
290J. Applied Mathematics.
290K. Probability.
290L. Dynamical Systems.
290M. Mathematics.
290N. Combinatorics.
290O. Cryptography.

Program in Computing
Lower Division Courses

1. Introduction to Computers and Computing. (4) Lecture, three hours; laboratory, one hour. Not open for credit to students with credit for course 15 or 10A; may not be taken concurrently with courses 15 or 10A. Fundamentals of computers and computing; editors,
450  /  Mathematics/Atmospheric and Oceanic Sciences

15. Software Tools for Information Management. (1) Lecture, one hour; laboratory, two hours. Preparation: some familiarity with computers. Not open for credit to students with credit for course 1; may not be taken concurrently with course 1. May be taken by students with credit for more advanced courses. Introduction to spreadsheets and databases in laboratory setting. P/NP or letter grading.

16. Computer System Organization. (1) Lecture, two hours; laboratory, two hours. Recommended requisite for students with no prior computing experience: course 1. May be taken concurrently with course 1. 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.

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Mathematics/Atmospheric and Oceanic Sciences

Interdepartmental Program
College of Letters and Science

UCLA
7127 Math Sciences
Box 951565
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(310) 825-1217
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http://www.atmos.ucla.edu/content/view/49/126/

Robert G. Fovell, Ph.D., Chair
Faculty Committee
Christopher R. Anderson, Ph.D. (Mathematics)
Robert G. Fovell, Ph.D. (Atmospheric and Oceanic Sciences)
J. David Neelin, Ph.D. (Atmospheric and Oceanic Sciences)
Peter Peterson, Ph.D. (Mathematics)

Scope and Objectives

The Mathematics/Atmospheric and Oceanic Sciences B.S. 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, ocean sciences, or applied mathematics. Postgraduate training leads to employment at a professional level in academia, government, or private enterprise. Opportunities outside academia include environmental 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 demanding 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 men-

spreadsheets, file manager; machine organization and computer hardware; Internet; software applications. P/ NP or letter grading.

15. Software Tools for Information Management. (1) Lecture, one hour; laboratory, two hours. Preparation: some familiarity with computers. Not open for credit to students with credit for course 1; may not be taken concurrently with course 1. May be taken by students with credit for more advanced courses. Introduction to spreadsheets and databases in laboratory setting. P/NP or letter grading.

16. Computer System Organization. (1) Lecture, two hours; laboratory, two hours. Recommended requisite for students with no prior computing experience: course 1. May be taken concurrently with course 1. 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.

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Mathematics/Atmospheric and Oceanic Sciences

Interdepartmental Program
College of Letters and Science

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http://www.atmos.ucla.edu/content/view/49/126/

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Peter Peterson, Ph.D. (Mathematics)

Scope and Objectives

The Mathematics/Atmospheric and Oceanic Sciences B.S. 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, ocean sciences, or applied mathematics. Postgraduate training leads to employment at a professional level in academia, government, or private enterprise. Opportunities outside academia include environmental 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 demanding 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 men-
tor. 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 B.S.

**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, one introductory course as possible prior to admission to UCLA: two years of calculus for majors, one C++ programming course.

Refer to the UCLA Transfer Admission Guide at http://www.admissions.ucla.edu/prospect/adm_tr.htm 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, 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, 125, 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**

UCLA

6363 Math Sciences

Box 951555

Los Angeles, CA 90095-1555

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http://www.math.ucla.edu/ugrad/mathecon.shtml

Don M. Blasius, Ph.D., Chair

**Faculty Committee**

Don M. Blasius, Ph.D. (Mathematics)
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Russel E. Caflisch, Ph.D. (Mathematics)
Kathleen M. McGarry, Ph.D. (Economics)
Robert F. Brown, Ph.D. (Mathematics)
Marek G. Fycza, Ph.D. (Economics)
Sebastien Roch, Ph.D. (Mathematics)
William R. Zame, Ph.D. (Economics, Mathematics)

**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 B.S. 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 B.S.**

**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 (Mathematics 31A, 31B, Economics 1, 2, and 11) are calculated separately from the mathematics preparation for the major courses (Mathematics 32A, 32B, 33A, 33B, 61, and Program in Computing 10A). The economics preparation courses must be completed with a minimum overall 2.5 grade-point average and a C or better in each course. The mathematics preparation courses must be completed with a minimum overall 2.0 grade-point average and a C– or better in each course. Students must receive a C or better in the Writing II course.

Repetition of more than one economics preparation course or of any economics 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 macroeconomics course, and one C++ programming course.

Transfer credit for any of the above is subject to department approval; consult an undergraduate counselor before enrolling in any courses for the major.

Refer to the UCLA Transfer Admission Guide at http://www.admissions.ucla.edu/prospect/adm_tr.htm for up-to-date information regarding transfer selection for admission.

**The Major**

**Required:** Six mathematics/statistics courses, including Mathematics 115A, 131A, 170A or Statistics 100A, 170B or Statistics 108B, and two courses from Mathematics 131B, 164, 174; five economics courses, including Economics 101, 102, 103, 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 an undergraduate counselor before enrolling in any courses for the major.

To graduate, the six Mathematics Department courses must be passed with an overall grade-point average of 2.0, as must the five courses from the Economics Department, with grades of C– or better in Economics 101 and 102.

**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 with an overall grade-point average of 3.5 or better.

To qualify for honors at graduation, students must (1) complete Mathematics 110BH or 131BH, and 115AH, (2) prepare a senior thesis acceptable to the departmental honors committee, (3) present the thesis in Economics 198A and 198B, and (4) complete the major requirements with at least a 3.5 GPA in the mathematics and economics 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, 20A, 20B, 30, 40A, 60, and at least two
MECHANICAL AND AEROSPACE ENGINEERING

Henry Samueli School of Engineering and Applied Science

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Robert T. M'Closkey, Ph.D., Vice Chair
Xiaolin Zhong, Ph.D., Vice Chair

Professors
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Oddvar O. Bendiksen, Ph.D.
Gregory P. Carman, Ph.D.
Ivan Catton, Ph.D.
Jiun-Shyan Chen, Ph.D.
Yong Chen, Ph.D.
Vijay K. Dhir, Ph.D., Dean
Rajit Gadh, Ph.D.
Nasr M. Ghoniem, Ph.D.
James S. Gibson, Ph.D.
Vijay Gupta, Ph.D.
Chih-Ming Ho, Ph.D. (Ben Rich Lockheed Martin Professor of Aeronautics)
Tetsuya Iwasaki, Ph.D.
Ann R. Karagozian, Ph.D.
Chang-Jin (C-J) Kim, Ph.D.
J. John Kim, Ph.D. (Rockwell Collins Professor of Engineering)

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Owen I. Smith, Ph.D.
Jason Speyer, Ph.D.
Tsu-Chin Tsaao, Ph.D.
Daniel C.H. Yang, Ph.D.
Xiaolin Zhong, Ph.D.

Professors Emeriti
Andrew F. Charwat, Ph.D.
Perez P. Friedmann, Sc.D.
H. Thomas Hahn, Ph.D. (Raytheon Company Professor Emeritus of Manufacturing Engineering)
Walter C. Hurty, M.S.
Robert E. Kelly, Sc.D.
Michel A. Melkanoff, Ph.D.
D. Lewis Mingori, Ph.D.
Peter A. Monkewitz, Ph.D.
Philip F. O'Brien, M.S.
David Okrent, Ph.D.
Lucien A. Schmit, Jr., M.S.
Richard E. Stern, Ph.D.
Russell A. Westmann, Ph.D.

Associate Professors
Pei-Yu Chiou, Ph.D.
Jeff D. Eldredge, Ph.D.
Y. Sungtaek Ju, Ph.D.
H. Pirouz Kavehpour, Ph.D.
William S. Klug, Ph.D.
Laurent G. Pilon, Ph.D.

Assistant Professor
Richard E. Wirz, Ph.D.

Lecturers
Ravneesh C. Amar, Ph.D.
Amiya K. Chatterjee, Ph.D.
Carl F. Ruoff, Ph.D.
Judy I. Shane, M.S.

Adjunct Professors
Leslie M. Lackman, Ph.D.
Wilbur J. Marner, Ph.D.
Neil B. Morley, Ph.D.
Robert S. Shafer, Ph.D.
Ronaldo Szilard, Ph.D.

Scope and Objectives

The Department of Mechanical and Aerospace Engineering offers curricula in aerospace engineering and mechanical engineering at both the undergraduate and graduate levels. The scope of the departmental research and teaching program is broad, encompassing dynamics, fluid mechanics, heat and mass transfer, manufacturing and design, nanoelectromechanical and microelectromechanical systems, structural and solid mechanics, and systems and control. The applications of mechanical and aerospace engineering are quite diverse, including aircraft, spacecraft, automobiles, energy and propulsion systems, robotics, machinery, manufacturing and materials processing, microelectronics, biological systems, and more.

At the undergraduate level, the department offers accredited programs leading to B.S. degrees in Aerospace Engineering and in Mechanical Engineering. At the graduate level, the department offers programs leading to M.S. and Ph.D. degrees in Mechanical Engineering and in Aerospace Engineering. An M.S. in Manufacturing Engineering is also offered.

Undergraduate Study

The Aerospace Engineering and Mechanical Engineering majors are designated capstone majors. Within their capstone courses, Aerospace Engineering students are exposed to the conceptual and design phases for aircraft development and produce a structural design of a component, such as a lightweight aircraft wing. Mechanical Engineering students work in teams in their capstone courses to propose, design, analyze, and build a mechanical or electromechanical device. Graduates of both programs should be able to apply their knowledge of mathematics, science, and engineering in technical systems; design a system, component, or process to meet desired needs; function as productive members of a team; identify, formulate, and solve engineering problems; and communicate effectively, both orally and in writing.

Aerospace Engineering B.S.

Capstone Major

The ABET-accredited 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; Computer Science 31; Mathematics 31A, 31B, 32A, 32B, 33A, 33B, Physics 1A, 1B, 1C, 4A, 4B, 4L.

The Major

Required: Mechanical and Aerospace Engineering 101, 102, 103, 105A, 107, 150A, 150B, 150F, 154S, 155 or 161A or 169A, 157A, 157S, 164A, 171A, 182A; two departmental breadth courses (Electrical Engineering 100 and Materials Science and Engineering 104) — or one if 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 154A, 154B); and two major field elective courses (8 units) from Mechanical and Aerospace Engineering 105D, 131A, 131AL, C132A, 133A, 133AL, 150C, C150S, 150R, 153A, 155 (unless taken as a required course), 161A (unless taken as a required course), 161B, 161C, 161D, 162A, 163A, 166C, M168, 169A (unless taken as a required course), 171B, 172, C175A, 181A, 182B, 182C, 183.

For information on University and general education requirements, see the College and Schools section earlier in this catalog.

Mechanical Engineering B.S.

Capstone Major

The ABET-accredited mechanical engineering program is designed to provide basic knowledge in thermodynamics, fluid mechanics, heat transfer, solid mechanics, mechanical design, dynamics, control, mechanical systems, manufacturing, and materials. The program includes fundamental subjects important to all mechanical engineers.
Preparation for the Major

Required: Chemistry and Biochemistry 20A, 20B, 20L; Computer Science 31; Mathematics 31A, 31B, 32A, 32B, 33A, 33B; Mechanical and Aerospace Engineering 94; 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, 157A, 162A, 171A, 182A, 183; 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 166A — 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 162B, 162M); and two major field elective courses (8 units) from Mechanical and Aerospace Engineering 131A (unless taken as a required course), 131AL, C132A, 133A (unless taken as a required course), 133AL, 134, 135, 136, CM140, 150A, 150B, 150C, C150G, 150P, 150R, 153A, 155, 157A, 161A, 161B, 162A, 163A, 163C, M168, 169A, 171B, 172, 174, C175A, CM180, CM180L, 181A, 182B, 182C, 184, 185, C186, C187L.

For information on University and general education requirements, see the College and Schools 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, http://www.gdnvnet.ucla.edu/gasla/library/pgmrintro.htm. 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 (M.S.) degree in Manufacturing Engineering, Master of Science (M.S.) and Doctor of Philosophy (Ph.D.) degrees in Aerospace Engineering, and Master of Science (M.S.) and Doctor of Philosophy (Ph.D.) degrees in Mechanical Engineering.

Mechanical and Aerospace Engineering

Lower Division Courses


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 Studying modern data acquisition and more online computer systems to design and display various objects. Letter grading.

Upper Division Courses


103. Elementary Fluid Mechanics. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Required: 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. Required: Chemistry 20B, Mathematics 32B. Phenomenological thermodynamics, irreversibility. 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.


107. Introduction to Modeling and Analysis of Dynamic Systems. (4) Lecture, four hours; discussion, one hour; laboratory; two hours; outside study, five hours. Required: Computer Science 31, Electrical Engineering 100 (enforced); Introduction to modeling of physical systems, with examples of mechanical, fluid, thermal, and electrical systems. Description of these systems, their behavior, stability, oscillations, impulse response, convolution, frequency response, first- and second-order system transient response analysis, and numerical solution. Nonlinear differential equation descriptions with discussion of equilibrium solutions, small signal linearization, large signal response. Block diagram representation and response of interconnections of systems. Hands-on experiments reinforce lecture material. Letter grading.


131AL. Thermodynamics and Heat Transfer Laboratory. (4) Laboratory, eight hours; outside study, four hours. Required: courses 131A, and 157 or 157S. Experimental study of physical phenomena and engineering systems, including modern data acquisition and processing techniques. Experiments include studies of heat transfer phenomena and testing of cooling tower, heat exchanger, and internal combustion engine. Students take and analyze data and discuss physical phenomena. Letter grading.


133A. Engineering Thermodynamics. (4) Lecture, discussion, four hours; outside study, six hours. Required: courses 132A, and 157 or 157S. Experimental study of power conversion and heat transfer processes in gas turbines, steam turbines, and combustion engines. Experiments include studies on various objects. Letter grading.

133AL. Power Conversion Thermodynamics Laboratory. (4) Laboratory, eight hours; outside study, four hours. Required: courses 133A, and 157 or 157S. Experimental study of power conversion and heat transfer processes in gas turbines, steam turbines, and combustion engines. Experiments include studies on various objects. Letter grading.

134. Design and Operation of Thermal Hydraulic Power Systems. (4) Lecture, three hours; laboratory, three hours; outside study, six hours. Required: courses 133A, 133AL. Thermal hydraulic design, maintenance and operation of power systems, gas turbines, steam turbines, centrifugal refrigeration units, absorption refrigeration units, compressors, valves and piping systems, and instrumentation and control systems. Letter grading.

135. Fundamentals of Nuclear Science and Engineering. (4) Lecture, two hours; outside study, six hours. Required: courses 131A, 133A. Thermal hydraulic design, maintenance and operation of power systems, gas turbines, steam turbines, centrifugal refrigeration units, absorption refrigeration units, compressors, valves and piping systems, and instrumentation and control systems. Letter grading.


137. Advanced Thermodynamics. (4) Lecture, discussion, four hours; outside study, six hours. Prior knowledge in engineering thermodynamics and fluid mechanics preferred. Letter grading.

139. Introduction to Biomechanics. (4) Same as Biomedical Engineering CM140. Lecture, four hours; discussion, two hours; outside study, six hours. Recommended: course 105D. Biomechanics of human body; skeletal and muscle functions. Conventional uses. Letter grading.

CM140. Introduction to Biomechanics. (4) Same as Biomedical Engineering CM140. Lecture, four hours; discussion, two hours; outside study, six hours. Recommended: course 105D. Biomechanics of human body; skeletal and muscle functions. Conventional uses. Letter grading.

150B. Aerodynamics. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Requisites: courses 129A, 130A. Thermodynamic properties of gases, aircraft jet engine cycle analysis and component performance, component matching, advanced aircraft engine topics. Letter grading.

150R. Rocket Propulsion. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisites: courses 103, 150A. Thermodynamic properties of gases, aircraft jet engine cycle analysis and component performance, component matching, advanced aircraft engine topics. Letter grading.


150C. Combustion Systems. (4) Lecture, four hours; outside study, eight hours. Enrollment required: courses 103, 150A. Chemical thermodynamics of ideal gas mixtures, premixed and diffusion flames, explosions and detonations, combustion chemistry, high explosives. Combustion processes in rocket, turbine, and internal combustion engines; heating applications. Letter grading.

151G. Fluid Dynamics of Biological Systems. (4) (Formerly numbered 150G.) Lecture, four hours; outside study, seven hours. Enrollment required: courses 103, 150A. Thermodynamic properties of gases, aircraft jet engine cycle analysis and component performance, component matching, advanced aircraft engine topics. Letter grading.

152. Mechanical Engineering Laboratory. (4) Laboratory, eight hours; outside study, four hours. Requisites: courses 101, 102, 105A, 105B, 150A, 150B, 150C. Analytical mechanics of rigid bodies. Euler equations, motion of rotating bodies, oscillatory motion, normal coordinates, linear systems and vibrations. Letter grading.

156A. Advanced Strength of Materials. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Enrollment required: courses 101, 182A. Not open to students with credit for course 166A. Concepts of stress, strain, and failure. Stress in loaded beams with symmetric and asymmetric cross sections. Torsion of cylinders and thin-walled structures, shear flow. Stresses in pressure vessels, pressuritization, rotating shafts. Curved beams. Contact stresses. Strength and failure, plastic deformation, fatigue, elastic instability. Letter grading.

157. Basic Mechanical Engineering Laboratory. (4) Laboratory, eight hours; outside study, four hours. Enrollment required: courses 101, 103, 105A, 105B, Electronic Engineering 100. Methods of measurement of basic quantities and performance of basic experiments in area of fluid mechanics/aerodynamics, as well as hands-on experience with design of experimental programs and use of modern experimental tools and techniques in field. Letter grading.

157F. Mechanical and Aerospace Engineering Laboratory. (4) Laboratory, eight hours; outside study, four hours. Enforced requirements: courses 101, 103, 105A, 105B. Experimental design of rocket propulsion systems and associated component performance. Control and command of primary transducers, computer-aided data acquisition, signal processing, and data analysis. Performance of experiments to enhance understanding of basic physical, chemical, and mechanical phenomena in area of fluid mechanics/aerodynamics. Letter grading.


161C. Spacecraft Design. (4) Lecture, four hours; outside study, eight hours. Enforced requisite: course 154S. Classical preliminary design of aircraft, including weight estimation, performance and stability, and control consideration. Term assignment consists of preliminary design of low-speed aircraft. Letter grading.

161D. Space Technology Hardware Design. (4) Lecture, two hours; laboratory, three hours; outside study, seven hours. Requisites: course 154S, 154V, 155A. Spacecraft design. Analytical methods for modern spacecraft design. Emphasis on design for reliability and integrity. Students work in groups of three or four, with each student responsible primarily for one subsystem and for integration with whole. Letter grading.

161E. Space Technology and Rocket Propulsion. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Enforced requisite: courses 103, 105A, 105B. Rocket engines, propulsion system design, and component performance for credit to students with credit for both courses 150R and 161R. Letter grading.

162. Mechanical Engineering Design I. (4) Lecture, two hours; laboratory, four hours; outside study, six hours. Requisites: courses 94, 156A, 162A, 163, Electrical Engineering 110L, Mechanical Engineering 110L. Introduction to computer-aided design. Use of modern design software packages for spacecraft and rocket system design. Laboratory modules include CAD design, analysis, computer-aided design, and mechanical design for team project. Letter grading.

162E. Mechanical Engineering Design II. (4) Laboratory, four hours; outside study, eight hours. Requisite: course 162D. Limited to seniors. Second of two mechanical engineering capstone design courses. Students design a project that builds upon work started in course 162D, with the aid of a CAD design laboratory, CAD analysis laboratory, and mechanical design laboratory. Design theory, design tools, economics, marketing, manufacturability, quality, intellectual property, design for manufacturability, design for safety and reliability, and design for social impact. Students conduct hands-on design, fabrication, and testing. Letter grading.

163A. Introduction to Computer-Controlled Machines. (4) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisites: course 154S, 154V, 155A. Modeling of computer-controlled machinery, including electrical, mechanical, and control systems. Letter grading.

163B. Analysis of Flight Structures. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Requisites: courses 101, 182A. Not open to stu-
students with credit for course 156A. Introduction to two-dimensional elasticity, stress-strain laws, yield and fatigue. Examination of torsion of thin-walled cross sections: shear flow, shear-lag; combined bending torsion of thin-walled, stiffened structures used in aerospace vehicles; elements of plate bending theory. Block exams. Letter grading.

166C. Design of Composite Structures. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Enforced requisite: course 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, buckling of composite components, non-symmetric laminates, micromechanics of composites. Letter grading.


172. Control System Design Laboratory. (4) Laboratory, one hour; design, two hours; outside study, five hours. Co-requisite: course 157A or Electrical Engineering 141. Application of frequency domain design techniques for control of mechanical systems. Successful control designer requires students to formulate performance specification for control problem, experimentally identify mechanical systems, and develop uncertainty descriptions for design models. Exploration of issues concerning model uncertainty and sensor/actuator placement. Students implement control designs on flexible structures, rate gyro, and inverted pendulum. Detailed reports required. Letter grading.

174. Probability and Its Applications to Risk, Reliability, and Decision Analysis. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Requisite: Mathematics 33A. Introduction to probability theory; random variables, distributions, functions of random variables. Properties of probability measures, reliability, redundancy, complex systems, stress-strength mod-

els, fault tree analysis, statistical quality control by vari-
ables and by attributes, acceptance sampling. Letter grading.

C175A. Probability and Stochastic Processes in Dynamical Systems. (4) Lecture, four hours; outside study, eight hours. Enforced requisites: courses 107, 182A. Probability spaces, random variables, stochastic sequences and processes, expectation, conditional expectation, Gaussian/Markov sequences, and minimum variance estimator (Kalman filter) with applications. Concurrently scheduled with course C271A. Letter grading.

CM180. Introduction to Micromachining and Microelectromechanical Systems (MEMS). (4) (Same as Biomedical Engineering CM150 and Electrical Engineering CM150.) Lecture, four hours; discussion, one hour; outside study, seven hours; outside study, eight hours. Requisites: Chemistry 20A, 20L, Physics 1A, 1B, 1C, 4AL, 4BL. Corequisite: course CM180L. Lecture to micromachining technologies and microelectromechanical systems (MEMS). Methods of micromachining and how these methods can be used to produce variety of MEMS, including microstructures, microsensors, and microactuators. Methods used to produce variety of MEMS, including microstructures, microsensors, and microactuators. Student work on developing prototypes of desired MEMS devices. Concurrently scheduled with course CM280A. Letter grading.

CM180L. Introduction to Micromachining and Microelectromechanical Systems Laboratory. (2) (Same as Biomedical Engineering CM150L and Electrical Engineering CM150L.) Lecture, one hour; laboratory, four hours; outside study, one hour. Requisites: CM180. Hands-on introduction to micromachining technologies and microelectromechanical systems (MEMS) laboratory. Methods of micromachining technologies and methods used to produce variety of MEMS, including microstructures, microsensors, and microactuators. Students go through process of fabricating MEMS device. Concurrently scheduled with course CM280L. Letter grading.

181A. Complex Analysis and Integral Transforms. (4) Lecture, four hours; outside study, eight hours. Enforced requisite: course 182A. Complex variables, analytic functions, conformal mapping, contour integrals, singularities, residues, Cauchy integrals; Laplace transform: properties, convolution, inversion; Fourier transform: properties, convolution, FFT, applications in dynamics, vibrations, structures, and heat conduction. Letter grading.


183. Introduction to Manufacturing Processes. (4) Lecture, three hours; laboratory, four hours; outside study, four hours. Enforced requisite: course CM104. Manufacturing fundamentals. Materials in manu-


184. Introduction to Geometry Modeling. (4) Lecture, four hours; laboratory, four hours; outside study, four hours. Requisites: course 94, Computer Science 31. Fundamentals in curve and surface modeling, parametric spaces, blending functions, conics, splines and Bezier curve, coordinate transforma-
tions, algebraic and geometric form of surfaces, analytical properties of curve and surface, hands-on experience with CAD/CAM systems design and implementation. Letter grading.

185. Introduction to Radio Frequency Identification and Its Application in Manufacturing and Supply Chain. (4) Lecture, four hours; discussion, two hours; outside study, six hours. Requisites: course 162B or 162D (enforced). Computer Science 31. Manufacturing today requires assembling of individual components into assembled products, shipping of such products, and eventually use, maintenance, and recycling of such products. Radio frequency identification (RFID) circumvents problems associated with assembling, and eventual recycling of products allowing them to be tracked automatically as they move through the manufacturing and supply chain process. RFID tags have memory and store data that allows an individual product status to be stored, transmitted and delivered. Data can then be forwarded by reader to enterprise software in the form of RFID data. Study of how RFID is being utilized in manufacturing, with focus on automotive and aerospace. Letter grading.

C186. Applied Optics. (4) (Formerly numbered 186.) Lecture, four hours; discussion, two hours; outside study, six hours. Requisite: course 182B. Fundamental principles of optical systems. GEometric optics and aberration theory. Diffraction and interference. Fourier optics, beam optics. Propagation of light, Snell’s law, and Huygen principle. Refraction and reflection, Plane waves, spherical waves, and image formation. Total internal reflection. Polarization, polarizers, and waveplates. Lenses and aberrations, lens laws and formation of images, resolution and primary aberrations. Simple optical instruments, still cameras, shutters, apertures. Design of telescopes, microscope design, projection system design. Basic phase, chemical, and biological principles related to these techniques, top-down and bottom-up (self-assembly) nanofabrication, nanochar-
acterization (AEM, SEM, etc.), and optical and electrochemical biosensors. Students encouraged to create their own ideas in self-designed experiments. Concurrently scheduled with course C286L. Letter grading.

C187L. Nanoscale Fabrication, Characterization, and Biodetection Laboratory. (4) Lecture, two hours; laboratory, two hours; outside study, eight hours. Multi-disciplinary course that introduces laboratory tech-
niques 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 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 under-
graduate students taught on experimental or tempo-
rary basis such as those organized by and visit-
ing 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) Lecture, two to four hours. Designed for undergraduate students who are part of research group. Discussion of research methods and current literature in field. Student presentation of proj-
eces in research specialty. May be repeated for credit. P/NP or letter grading.
Graduate Courses


235A. Nuclear Reactor Theory. (4) Lecture, four hours; outside study, eight hours. Requisites: currently scheduled with course C132A. Letter grading.

235G. 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 propagation of real heat carriers, transport equations, derivation of classical laws from Boltzmann transport equations, deviation from classical laws at small scale. Letter grading.


239B. Seminar: Current Topics in Transport Phenomena. (2 to 4) Seminar, two to four hours; outside study, eight hours. Requisites: courses 250A, 250B, 250C. Molecular and chemical description of equilibrium and nonequilibrium factors and high-temperature gas flows, chemical thermodynamics and statistical thermodynamics for calculations, equilibrium flows of real gases, vibrational and chemical rate processes, nonequilibrium flows of real gases, and computational fluid dynamics methods for nonequilibrium hyperthermal flows. Letter grading.

239G. Special Topics in Nuclear Engineering. (2 to 4) Lecture, two to four hours; outside study, four to eight hours. Designed for graduate mechanical and aerospace engineering students. Advanced study in areas of current interest in nuclear engineering, such as reactor safety, risk-benefit trade-offs, nuclear materials, and reactor design. May be repeated for credit with topic change. S/U grading.

239H. Special Topics in Fusion Physics, Engineering, and Technology. (2 to 4) Seminar, two to four hours; outside study, four to eight hours. Designed for graduate mechanical and aerospace engineering students. Advanced study in areas of current interest in nuclear engineering, such as reactor safety, risk-benefit trade-offs, nuclear materials, and reactor design. May be repeated for credit with topic change. S/U grading.


252A. Stability of Fluid Motion. (4) Lecture, four hours; outside study, eight hours. Requisite: course 150A. Instabilities that can become unstable and lead to turbulence of secondary motions. Linear stability theory; thermal, centrifugal, and shear instabilities; boundary layer instability. Nonlinear aspects: sufficient conditions, linear and nonlinear instabilities, supercritical states, transition to turbulence. Letter grading.


252D. Combustion Rate Processes. (4) Lecture, four hours; outside study, eight hours. Requisite: course 150A. Basic concepts of fluid mechanics: molecular collisions, distribution functions and averaging, semianalytical and ab initio potential surfaces, trajectory calculations, statistical reaction rate theories. Practical examples of large-scale chain mechanisms from combustion chemistry of several elements, etc. Letter grading.

253A. Advanced Engineering Acoustics. (4) Lecture, four hours; outside study, eight hours. Advanced topics in engineering acoustics, including plane wave propagation, spherical wave propagation, stationary wave propagation, propagation in bounded media, Ray acoustics; attenuation mechanisms in fluids and solids. Letter grading.


255A. Advanced Dynamics. (4) Lecture, four hours; outside study, eight hours. Requisites: courses 155, 169A. Variational principles and Lagrange equations. Kinematics and dynamics of rigid bodies; procession and nutation of spinning bodies. Letter grading.

255B. Mathematical Methods in Dynamics. (4) Lecture, four hours; outside study, eight hours. Requisite: course 255A. Concepts of stability, state-space interpretation; stability determination by simulation, linearization, and Lyapunov direct method; the Hamiltonian as a Lyapunov function; nonautonomous systems; averaging techniques; methods of nonresonance analysis; parametric excitation and nonlinear resonance. Application to mechanical systems. Letter grading.

M256A. Linear Elasticity. (4) (Same as Civil Engineering M230A.) Lecture, four hours; outside study, eight hours. Requisite: course 156A or 166A. Linear elastostatics. Cartesian tensors; infinitesimal strain tensor; Cauchy stress tensor; strain energy; equilibrium equations; linear constitutive relations; plane elasticity problems; holes, corners, inclusions, cracks; three-dimensional problems of Kelvin, Boussinesq, and Cerruti. Introduction to boundary integral equation method. Letter grading.

M256B. Nonlinear Elasticity. (4) (Same as Civil Engineering M230B.) Lecture, four hours; outside study, eight hours. Requisite: course M256A. Kinematics of deformation; stress; 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 linear momentum; constitutive relations; elastic, hyperelasticity, thermoplasticity, linearization of field equations; solution of selected problems. 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/macro analysis, including classical lamination theory, shear lag theory, concentric cylinder analysis, hexagonal models, and calculation of homogenization techniques as they apply to active materials. Active systems design, inch-worm, and bimorph. Letter grading.

263A. Analytical Foundations of Motion Controlers. (4) Lecture, four hours; outside study, eight hours. Recommended requisites: courses 163A, 294. Theory of motion control for modern computer-controlled machine tool systems. Design of feedback control systems; machine kinematics and dynamics; multi-axis control of machine tools; coordination routines for robotic systems; design and analysis of trajectory planning and analysis; geometry-speed-sampling time relationships. Letter grading.

263B. Spacecraft Dynamics. (4) Lecture, four hours; outside study, eight hours. Requisite: course 255A. Recommended requisites: courses 163A, 294. Theory of motion control for modern computer-controlled machine tool systems. Design of feedback control systems; machine kinematics and dynamics; multi-axis control of machine tools; coordination routines for robotic systems; design and analysis of trajectory planning and analysis; geometry-speed-sampling time relationships. Letter grading.

271B. Stochastic Estimation. (4) Lecture, four hours; outside study, eight hours. Requisite: course 271A. Linear and nonlinear estimation theory, orthogonal projection lemma, Bayesian filtering theory, conditional mean and risk estimators. Letter grading.


M270A. Linear Optimal Control. (4) Lecture, four hours; outside study, eight hours. Requisite: course M270A or Electrical Engineering M240A. Existence and uniqueness of solutions to linear quadratic (LQ) optimal control problems for continuous-time and discrete-time systems, finite-time and infinite-time problems; Hamiltonian systems and optimal control, algebraic and differential Riccati equations; implications of optimality and stability; controllability, observability, realizability, and detectability. Letter grading.

M270B. Optimal Control. (4) (Same as Chemical Engineering M280A and Electrical Engineering M240B.) Lecture, four hours; outside study, eight hours. Requisite: course 171A or Electrical Engineering 141. State-space methods for linear, time-invariant (LTI) and time-varying (LTV) systems in continuous and discrete time. Linear algebra concepts such as eigenvectors and eigenvalues, singular values, Cayley/ Hamilton theorem, Jordan forms; matrix equations; stability, controllability, observability, realizability, and minimality. Stabilization design via state feedback and observers; separation principle. Connections with Kalman filter and estimation techniques. Letter grading.

270B. Linear Optimal Control. (4) Lecture, four hours; outside study, eight hours. Requisite: course M270A. Advanced study of topics in linear quadratic (LQ) optimal control problems for continuous-time and discrete-time systems, finite-time and infinite-time problems; Hamiltonian systems and optimal control, algebraic and differential Riccati equations; implications of optimality and stability; controllability, observability, realizability, and detectability. Letter grading.

271A. Probability and Stochastic Processes in Dynamical Systems. (4) (Formerly numbered 271A.) Lecture, four hours; outside study, eight hours. Enforced requisites: courses 107, 182A. Probability spaces, random variables, stochastic processes and expectations, conditional expectation, Gaussian/Markov processes, and first-order linear differential equations. Markov chains; stationarity and ergodicity; martingales and conditional independence; Kalman filter with applications. Concurrently scheduled with course C175A. Letter grading.

271B. Stochastic Estimation. (4) Lecture, four hours; outside study, eight hours. Requisite: course 271A. Linear and nonlinear estimation theory, orthogonal projection lemma, Bayesian filtering theory, conditional mean and risk estimators. Letter grading.


M270A. Linear Optimal Control. (4) Lecture, four hours; outside study, eight hours. Requisite: course M270A or Electrical Engineering M240A. Existence and uniqueness of solutions to linear quadratic (LQ) optimal control problems for continuous-time and discrete-time systems, finite-time and infinite-time problems; Hamiltonian systems and optimal control, algebraic and differential Riccati equations; implications of optimality and stability; con-
Topics selected from process control, differential games, nonlinear estimation, adaptive filtering, industrial and automation ideas in a user-friendly manner. Letter grading.


273A. Robust Control System Analysis and Design. (4) Lecture, four hours; outside study, eight hours. Requisites: courses 171A, M270A. Graduate-level introduction to analysis and design of multivariable control systems. Multivariable loop-shaping, performance requirements, model uncertainty representations, and robustness covered in detail from frequency domain perspective. Structured singular value and its application to controller synthesis. 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 of sampled data systems. Comparison of continuous-time models. Models identified include transfer functions and state-space models. Discussion of applications in mechanical and aerospace engineering, including robotics, micro-electromechanical systems (MEMS) devices, and acoustic ducts. Letter grading.


277. Advanced Digital Control for Mechatronic Systems. (4) Lecture, four hours; laboratory, two hours; outside study, six hours. Requisites: courses 171B, M280A. Design and analysis of control systems that generate coordinated oscillations. Topics include neuronal information processing through action potentials (spike train), central pattern generator, coupled nonlinear oscillators, optimal gaits (periodic motion) for animal locomotion, and entrainment to natural oscillations via feedback control. Letter grading.

CM280A. Introduction to Micromachining and Microelectromechanical Systems (MEMS). (4) (Same as Biomedical Engineering CM250A and Electrical Engineering CM250A.) Lecture, four hours; discussion, one hour; outside study, seven hours. Requisites: Chemistry 20A, 20L, Physics 1A, 1B, 1C, 4A, 4L. Corequisite: course CM280L. Introduction to micromachining technologies and microelectromechanical systems (MEMS). Methods of micromachining and how these methods can be used to produce variety of MEMS, including microstructures, microsensors, and microactuators. Students design microfabrication processes capable of achieving desired MEMS device. Concurrently scheduled with course CM190. Letter grading.

M280B. Microelectromechanical Systems (MEMS) Fabrication. (4) (Same as Biomedical Engineering M282L and Electrical Engineering M242A.) Lecture, three hours; discussion, one hour; outside study, eight hours. Enforced requisite: course CM180 or CM280A. Advanced discussion of micromachining processes used to construct MEMS components. Topics include lithographic, deposition, and etching processes, as well as their combination in process integration. Materials issues such as chemical resistance, corrosion, mechanical properties, and residual/intrinsic stress. Letter grading.

CM280L. Introduction to Micromachining and Microelectromechanical Systems (MEMS) Laboratory. (2) (Same as Biomedical Engineering CM250L and Electrical Engineering CM250L.) Lecture, one hour; laboratory, four hours; outside study, one hour. Requisites: Chemistry 20A, 20L, Physics 1A, 1B, 1C, 4A, 4L. Corequisite: course CM280A. Hands-on applications in micromachining technologies and microelectromechanical systems (MEMS) laboratory. Students go through process of fabricating MEMS device. Concurrently scheduled with course CM180L. Letter grading.

281. Microstructures. (4) Lecture, four hours; outside study, eight hours. Basic science issues in micro domain. Topics include micro fluid science, microscale heat transfer, mechanical behavior of microstructures, as well as dynamics and control. Letter grading.

M282. Microelectromechanical Systems (MEMS) Device Physics and Design. (4) (Same as Biomedical Engineering M252 and Electrical Engineering M252.) Lecture, four hours; outside study, eight hours. Introduction to MEMS design. Design methods, design rules, sensing and actuation mechanisms, microsensors, and microactuators. Designing MEMS to be produced with both processes. Computer-aided design for MEMS. Design project required. Letter grading.

283. Experimental Mechanics for Microelectromechanical Systems (MEMS)/(4) Lecture, four hours; outside study, eight hours. Methods, techniques, and philosophies being used to characterize microelectromechanical systems for engineering applications. Material characterization, mechanical/material properties, mechanical characterization. Topics include fundamen- tals of crystallography, anisotropic material properties, and behavioral characteristics. Considerable emphasis on emerging experimental approaches to assess design-relevant mechanical properties. Letter grading.


285. Interfacial Phenomena. (4) Lecture, four hours; outside study, eight hours. Requisites: courses 103, 105A, 105D, 182A. Introduction to fundamental physical phenomena occurring at interfaces and application of their knowledge to engineering problems. Fundamental concepts of interfacial phenomena, including surface tension, capillary waves, surfactants, shockwaves, and interfacial dynamics, interfacial forces, interfacial hydrodynamics, and dynamics of triple line. Presentation of various applications, including wetting, change of phase (boiling and condensation), forms and emulsions, microelectromechanical systems, and biological systems. Letter grading.

C286. Applied Optics. (4) Lecture, four hours; discussion, one hour; outside study, eight hours. Requisite: course 171A. Advanced topics in linear systems. System inversion-based digital control algorithms and robustness properties, Youla parameterization of stabilizing controllers, previewed systems, compensator synthesis, and learning and control, and adaptive control. Real-time control investigation of topics to selected mechatronic systems. Letter grading.

287. Nanoscience and Technology. (4) (Same as Electrical Engineering M257.) Lecture, four hours; outside study, eight hours. Enforced requisite: course CM280A. Introduction to fundamentals of nanoscience and technology. Basic physical principles, quantum mechanics, chemical bonding and nanostructures, top-down and bottom-up (self-assembled) nano fabrication; nanocharacterization; nanomaterials, nanoelectronics, and nanobiotechnology. Introduction to new knowledge and techniques in nano areas to understand scientific principles behind nano devices. Letter grading.

C287L. Nanofabrication, Characterization, and Biodetection Laboratory. (4) Lecture, two hours; laboratory, two hours; outside study, eight hours. Multidisciplinary course that introduces laboratory techniques of nanofabrication, fabrication, and biodetection. Basic physical, chemical, and biological principles related to these techniques, top-down and bottom-up (self-assembled) nanofabrication; nanocharacterization (AEM, SEM, etc.), and optical and electrochemical biosensors. Students encouraged to create their ideas in self-designed experiments. Concurrently scheduled with course C187L. Letter grading.

288. Laser Microfabrication. (4) Lecture, four hours; outside study, eight hours. Requisites: Materials Science 104, Physics 17. Science and engineering of laser microfabrication of advanced materials, including semiconductors, metals, and insulators. Topics include fundamentals in laser interactions with advanced materials, transport issues (therma, mass, chemical, carrier, etc.) in laser microfabrication, state-of-art optics and instrumentation for laser microfabrication, applications such as rapid prototyping, surface modifications (physical/chemical), microfabrication for three-dimensional MEMS (microelectromechanical systems) and data storage, up-to-date research activities. Student term projects. Letter grading.


294. Computational Geometry for Design and Manufacturing. (4) Lecture, four hours; outside study, eight hours. Requisite: course 184. Computational geometry for design and manufacturing, with special emphasis on curve and surface theory. Geometric modeling of curves and surfaces, B-splines and NURBS, composite curves and surfaces, computing methods for surface design and manufacturing, student research topics in computational geometry for CAD/CAM systems. Letter grading.


295B. Internet-Based Collaborative Design. (4) Lecture, four hours; outside study, eight hours. Preparation: courses 94, 184. Exploration of advanced state-of-the-art concepts in Internet-based collaborative design, including software environments to connect de-
597B. Preparation for Ph.D. Preliminary examinations. (2 to 16) Tutorial, to be arranged. Limited to graduate mechanical and aerospace engineering students. S/U grading.

597C. Preparation for Ph.D. Oral Qualifying Examination. (2 to 16) Tutorial, to be arranged. Limited to graduate mechanical and aerospace engineering students. Preparation for oral qualifying examination, including preliminary research on dissertation. S/U grading.

598. Research for and Preparation of M.S. Thesis. (2 to 12) Tutorial, to be arranged. Limited to graduate mechanical and aerospace engineering students. Supervised independent research for M.S. candidates, including thesis prospectus. S/U grading.

599. Research for and Preparation of Ph.D. Dissertation. (2 to 16) Tutorial, to be arranged. Limited to graduate mechanical and aerospace engineering students. Usually taken after students have been advanced to candidacy. S/U grading.

**MEDICINE**

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Dennis J. Slamov, M.D. (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 in formation 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 further details on the Department of Medicine and a listing of the courses offered, see http://www.medstudent.ucla.edu.

**Medicine**

Upper Division Courses

M160A. Health Outreach and Education for At-Risk Populations. (4) (Same as Public Health M160A.) Lecture, four hours; optional 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 Public Health 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, discussion groups, and field activities including health education. P/NP or letter grading.

M160C. Health Outreach and Education to At-Risk Populations. (4) Formerly numbered 190C.) Seminar, two hours; fieldwork, six to eight hours. Requires: courses M160A, M160B. Processes involved with designing, delivering, and assessing community health education programs, under supervision of professional staff. P/NP or letter grading.

180. 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.

199. Directed Research in Medicine. (2 to 8) Tutorial, two hours. Limited to juniors/seniors. Supervised individual research or inves-tigation under the guidance of a faculty mentor. Culminating paper required. May be repeated for credit. Individual contract required. P/NP or letter grading.

**Graduate Courses**

M215. Interdepartmental Course: Tropical Medicine. (2) (Same as Pathology M215 and Pediatrics 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 the world. Major emphasis is on infectious diseases, with coverage of problems in nutrition and exotic noninfectious diseases. Syllabus supplements topics covered in classroom. S/U grading.

M256. Interdisciplinary Response to Infectious Disease Emergencies: Medicine Perspective. (4) (Same as Community Health Sciences M256, Nursing M259, 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, II. (4-4) (Same as Biostatistics M260A-M260B.) Lecture, four hours. Recommended preparation: M.D., Ph.D., or dental degree. Requires: Biostatistics 170A, 265A. Course M260A is requisite to M260B. Presentation of principles and practices of major disciplines underlying clinical research methodology, such as biostatistics, epidemiology, pharmaco-kinetics. S/U or letter grading.
M260C. Methodology in Clinical Research III. (4)
(Same as Biomathematics M260C.) Discussion, four hours.
Recommended preparation: M.D., Ph.D. 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 Biomathematics 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 clinical 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 Bio-
mathematics M263 and Psychiatry 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.

M270C. Advanced Modeling Methodology for
Dynamic Biomedical Systems. (4) (Same as Biomed-
eering M296A and Computer Science M296A.) Lecture, four hours; outside study, eight hours.
Preparation: Electrical Engineering 141 or 142 or Mathematics 115A or Mechanical and Aerospace En-
eering 171A. Development of dynamic systems modeling methodology for physiological, biomedical, pharmacological, chemical, and related systems. Con-
trol system, multicomponent, noncompartmental, and input/output models, linear and nonlinear. Empha-
sis on model applications, limitations, and relevance in biomedical sciences and other limited data environ-
ments. Problem solving in PC laboratory. Letter grad-
ing.

M270D. Optimal Parameter Estimation and Experi-
timent Design for Biomedical Systems. (4) (Same as Biomathematics M270, Biomedical Engineering
M296B, and Computer Science M296B.) Lecture, four hours; outside study, eight hours. Preparation: course M220C. Estimation methodologies and model parameter estimation algorithms 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 de-
sign via applications in physiology and pharmacology. Letter grading.

M270E. Advanced Topics and Research in Bio-
medical Systems Modeling and Computing. (4)
(Same as Biomedical Engineering M296C and Com-
puter Science M296C.) Lecture, four hours; outside study, eight hours. Preparation: course M270C. Re-
commended: course M270D. Research techniques and experience on special topics involving models, modeling methods, and model/computing in biological and medical sciences. Review and critique of literature. Re-
search problem searching and formulation. Approac-

M290A-M290B. Child Abuse and Neglect. (2-2)
(Same as Community Health Sciences M245A-
M245B-M245C, Dentistry M300A-M300B-M300C, Ed-
Nursing M290A-M290B-M290C, and Social Welfare
M202F-M203G-M203H.) Lecture, two hours. Course
M290A is requisite to M290B. Intensive interdisciplinary study of child physical and sexual abuse and neg-
lect, with lectures by faculty members of Schools of Dentistry, Law, Medicine, Nursing, and Public Health and Departments of Education and Psychology, as well as by relevant public agencies. Letter grading.
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 to the Microbiology, Immunology, and Molecular Genetics 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, 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 at [http://www.admissions.ucla.edu/prospect/adm_tr.htm](http://www.admissions.ucla.edu/prospect/adm_tr.htm) for up-to-date information regarding transfer selection for admission.

Students intending to major in Microbiology, Immunology, and Molecular Genetics may seek counseling and petition to enter the major in the Student Affairs Office, 1602B Molecular Sciences.

**The Major**

**Required:** Four foundation courses (Chemistry and Biochemistry 153A, Microbiology, Immunology, and Molecular Genetics 101, 103L, 185A); five focus elective courses selected from Chemistry and Biochemistry 153L, Microbiology, Immunology, and Molecular Genetics 102, 106, 107, 123, 132, CM156, 168, 198C, 199, Molecular Cell, and Developmental Biology 138, 165A; and at least 8 units of general elective courses selected from Biostatistics 100A, Chemistry and Biochemistry 103, 110A, 113B, 114A, 153B, 153C, 156, CM180A, CM161A, 171, 172, C179, C181, Ecology and Evolutionary Biology 121, 135, 137, 162, Epidemiology 100, Human Genetics C144, Life Sciences 100HA, Molecular Cell, and Developmental Biology 100, 138, M140, C141, 143, 144, 165A, 168, 172, 187A, Neuroscience M101A, M101B, M101C.

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.

**Honors Program**

Overall grade-point averages of 3.2 and 3.5 in the preparation for the major and major respectively are required to apply for departmental honors. In addition students must have junior standing and the sponsorship of a faculty advisor 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 Graduate Division website, [http://www.gdnet.ucla.edu/gasaa/library/pgmrqintro.htm](http://www.gdnet.ucla.edu/gasaa/library/pgmrqintro.htm). 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 (M.S.) and Doctor of Philosophy (Ph.D.) degrees in Microbiology, Immunology, and Molecular Genetics.

**Microbiology, Immunology, and Molecular Genetics**

**Lower Division Courses**

5. **Science of Memory and Learning.** (4) Lecture, seven hours. Nature of intelligence, overview of brain structure, study of memory systems, including memory retrieval, context of memories with emotion, sleep, and memory. Survey of metacognition and performance of learning. Offered in summer only. P/NP or letter grading.

6. **Microbiology for Nonmajors.** (4) Lecture, four hours. Not open for credit to students with credit for course 101 or Life Sciences 2. Designed for non-science students; introduction to biology of microorganisms (bacteria, viruses, protozoa, algae, fungi), their significance as model systems for understanding fundamental cellular processes, and their role in human affairs. P/NP or letter grading.

7. **Developments in Biotechnology.** (4) Lecture, three hours; demonstration/laboratory, one hour. Recommended preparation: course 6 or Life Sciences 2. Survey of recent developments in biotechnology, with emphasis on use of single-cell organisms. Review of basic principles of microbiology as they apply to biotechnology and examination of wide variety of topics, including alternate energy sources, pollution, cleanup, genetic fingerprinting, genetic engineering, and agricultural and food microbiology. P/NP or letter grading.

10. **Medical Microbiology for Nursing Students.** (4) Lecture, three hours; discussion, one hour. Requisite: 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 disease caused by microbial infections. Letter grading.

12. **Biological Threats to Society: Bioterrorism and Emerging Infections.** (4) Lecture, four hours. Examination of biological threats to American society. Coverage of biological weapons going back to first attempts to use microbes or toxins as weapons, and of emerging infections. Introduction to basic biology to understand infectious disease. P/NP or letter grading.

20. **Prenursing Medical Microbiology.** (4) Lecture, four hours; discussion, one hour. Requisite: Mathematics 3A or 31A. Investigation of medical microbiological life, with emphasis on bacterial pathogens from host, as well as pathogen, perspective. Role of pathogens in development of human immune response, presentation of symptoms and disease caused by microbial infections, and diagnosis and treatment of microbial infections. Offered in summer only. Letter grading.

**Upper Division Courses**

100L. **Microbiology Laboratory for Professional Students.** (4) Lecture, 75 minutes; 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, and three-dimensional cryo-electron microscopy; and atomic force and other scanning probe microscopy modalities. Practical experience in research provided while working collaboratively on interdisciplinary experiments and projects. Students should leave with ability to draw analogies between disciplines and choose most appropriate method to analyze problems within context of new topics. 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 technologies used in biochemistry, medicine, microbiology, and nano research. Basic image formation principles of microscopy, methods for sample preparation, imaging, data acquisitions, and three-dimensional reconstruction and visualization. Fluorescence, confocal, and super-resolution light microscopy; transmission electron microscopy, electron tomography, and atomic force and other scanning probe microscopy modalities. Practical experience in research provided through five carefully designed electron microscopy laboratory modules. P/NP or letter grading.

106. **Molecular and Genetic Basis of Bacterial Infections.** (4) Formerly numbered C106.) Lecture, three hours; discussion, one hour. Requisite: course 101. Biological and genetic properties of bacteria that afford potential for pathogenicity, Epidemiology and transmission of disease; chemotherapy and drug resistance. Regulation of virulence factors. Letter grading.

120. Advanced Techniques in Microbiology. (4) (Formerly numbered C120.) Lecture, one hour; laboratory, six hours. Prerequisite: course 102L (or course 101L or 102L) with grade of C or better. Introduction to current recombinant techniques. Experiments include PCR, cloning, and other recombinant techniques. Laboratory: appropriate to answer such questions. Concurrently scheduled with course CM222. P/NP or letter grading.

158. Microbial Genomics. (4) Lecture; three hours; discussion, one hour. Prerequisites: course 101, Chemistry 153A. Evolution, biodiversity, and sequencing of genomes; bacterial and viral genomes; bioinformatics; gene knockouts; genetic disease genes, transgenesis and its application in developmental genomics, mutagenesis screening and cloning of genetic approaches to studying fundamental biological principles. Concurrently scheduled with course CM222. P/NP or letter grading.

C122. Mouse Molecular Genetics. (2) (Same as Human Genetics CM122.) Lecture, two hours. Prerequisite: Life Sciences 4. Emphasis on use of mouse genetic approach to studying fundamental biological questions. Topics include mouse genome and functional genomics, and modeling human genetic disorders. Reading materials include original papers and reviews. Concurrently scheduled with course CM222. P/NP or letter grading.

123. Advanced Analysis and Comparative Genomics. (4) Lecture, two and one half hours; computer laboratory, six hours. Prerequisite: course 103L or Molecular, Cell, and Developmental Biology 187A with grade of B- or better. Participation in discovery-based research experience, working as research team to analyze microarray data and perform bioinformatic techniques involving variety of online databases. Investigation of cellular pathways and structures as means to discover novel genes and genetic variation in classical systems. Results of high-quality annotation efforts may lead to publication in peer-reviewed science journal. Part of DOE Joint Genome Institute Undergraduate Research in Microbial Genomes Annotation education program. Offered in summer only. Letter grading.


CM133. Frontiers in Biotechnology. (2) (Same as Chemical Engineering CM133.) Lecture, two hours. Prerequisites: Chemistry 153A and 153B, or Life Sciences 3 and 4, with grades of B or better. Integration of science and technology; role of biotechnology in conjunction with pharmaceutical, agricultural, and other key industries, therapeutics, crop improvement, devices, and other industry sectors. Academic research leading to licensing and development that turn research breakthroughs into marketable products. Stages of product discovery and development. Staged financing and growth: private offerings, public offerings, deals, collaborations, outsourcing, intellectual property, regulation, pricing, profits, risks, public perception. Building all value, exit strategies, mergers and acquisitions. Concurrently scheduled with course CM233. P/NP or letter grading.

C134. Ethics and Accountability in Biomedical Research. (2) Seminar, two hours. Designed for graduate students and undergraduates who have credit for life sciences or biological studies. Course 199B is a required offered laboratory 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, disclosure, animal subject welfare, human subject protection, and areas in which investigational goals and certain societal values may conflict. Concurrently scheduled with course CM198. P/NP grading.

CM156. Human Genetics. (4) (Same as Human Genetics CM156 and Molecular, Cell, and Developmental Biology CM156.) Lecture, three hours; discussion, two hours. Prerequisite: Life Sciences 4. Emphasis on use of mouse genetic principles in human populations, with emphasis on cytogenetics, biochemical genetics, population genetics, and family studies. 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 CM222. P/NP or letter grading.

191H. Honors Research Seminars: Microbiology, Immunology, and Molecular Genetics. (2) Seminar, two hours. Prerequisite for corequisite: course 198A or 198B or 198C. Limited to senior microbiology, immunology, and molecular genetics honors program students. Discussion of current research literature, with focus on thesis topics areas that students are working on as part of departmental honors requirements. One-hour presentation of student thesis research and current literature associated with it required. May be repeated for credit. Letter grading.

193A. Journal Club Seminars: Microbiology, Immunology, and Molecular Genetics. (1) Seminar, one hour. Limited to undergraduate students. Discussion of readings selected from current literature in microbiology, immunology, and molecular genetics. Letter grading.

193B. Journal Club Seminars: Microbiology, Immunology, and Molecular Genetics. (1) Seminar, one hour. Limited to undergraduate students. Discussion of readings selected from current literature in microbiology, immunology, and molecular genetics. Letter grading.

194A. Research Group Seminars: Microbiology, Immunology, and Molecular Genetics. (1) Seminar, one hour. Designed for undergraduate students who are part of research group in department family laboratory. Discussion of research from current literature in field of research or for research faculty members or students. 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, discussion, review, and critique of current papers in biomedical sciences disciplines, utilizing skills necessary for effective oral communication and effective use of software such as PowerPoint for oral presentations. May be repeated for credit. Letter grading.

197. Individual Studies in Microbiology, Immunology, and Molecular Genetics. (2 to 4) Tutorial, four hours. Limited to junior/senior level students in UC LEADS and NIH/MARC programs. Directed independent research project under guidance of departmental faculty mentor. Guided research course to be taken in conjunction with course 188A, followed by continuation research course 179B. Technical aspects of independent research project 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.

197B. Advanced Independent Research in Microbiology, Immunology, and Molecular Genetics. (4) Laboratory, 12 hours. Prerequisites: Life Sciences 3, 4, and 0.3 premajor and/or major grade-point average, and at least one term of prior experience in same laboratory in which 179A research is to be conducted. Corequisite: course 188A or Molecular, Cell, and Developmental Biology 188A. 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 188A, followed by continuation research course 179B. Technical aspects of independent research project 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.

185A. Immunology. (5) Lecture, three hours; discussion, 90 minutes. Prerequisites: Life Sciences 3, 4. Recommended prerequisite or corequisite: Chemistry 153A. Not open for credit to students with credit for course 261. Introduction to experimental immunobiology and immunochemistry; cellular and molecular aspects of humoral and cellular immune reactions. Letter grading.

188A. Special Computer Seminar: Microbiology, Immunology, Infectious Disease, and Molecular Genetics. (2) Seminar, two hours. Corequisites: course 179A or Molecular, Cell, and Developmental Biology 179A. 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.

188C. Special Courses in Microbiology, Immunology, and Molecular Genetics. (4) (Formerly numbered 199A.) Tutorial, 12 hours. Preparation: minimum 2.5 grade-point average in premajor and major. Supervised individual research project under guidance of departmental faculty mentor. Copy of report describing research must be filed with Student Affairs Office by end of term. May be repeated for credit. Individual contract required. Letter grading.

199. Directed Research in Microbiology, Immunology, and Molecular Genetics. (4) (Formerly numbered 199A.) Tutorial, 12 hours. Preparation: minimum 2.5 grade-point average in premajor and major. Supervised individual research project under guidance of departmental faculty mentor. Copy of report describing research must be filed with Student Affairs Office by end of term. May be repeated for credit. Individual contract required. Letter grading.

Graduate Courses

208. Molecular Biology of Animal Viruses. (4) Lecture, three hours. Preparation: courses in general biochemistry and general microbiology, including virology. Recommended for advanced undergraduate students, majors in public health, biology, or microbiology and for graduate students with interest in any field of biology or chemistry. Coevolution of animal viruses, including viral structure, virus-cell interaction, viral replication, and viral oncogenesis. Special emphasis on understanding molecular mechanisms in coinfection.

M229. Molecular Mechanisms of Host/Pathogen Interaction. (4) (Same as Pathology M229.) Lecture, two hours; discussion, two hours. Requisites: Biological Chemistry 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 mechanisms of microbial interactions with eukaryotic host cells. Letter grading.

CM233. Frontiers in Biotechnology. (2) (Same as Chemical Engineering CM233.) Lecture, two hours. Requisites: Chemistry 153A and 153B, or Life Sciences 3 and 4, with grades of B or better. Integration of science and business in biotechnology. Coevolution with pharmaceutical, agricultural, and other key industries, research, development, devices, and other industry sectors. Academic research leading to licensing and founding of companies that turn research breakthroughs into marketable products. Staged research and development. Staged financing and growth: private offerings, public offerings, deals, collaborations, outsourcing. Intellectual property, regulation, pricing, profits, risks, public perception, Building value exit strategies, mergers and acquisitions. Concurrently scheduled with course CM133. S/U or 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, disclosure, animal subject welfare, human subject protection, which investigator ethics, and certain societal values may conflict. Concurrently scheduled with course C134. S/U grading.

M240. Cytokines and Reproductive Biology. (2) (Same as Molecular, Cell, and Developmental Biology M240.) Lecture, 59 minutes; discussion, one hour. Overview of current progress on research in cytokines and other immune system molecules in reproductive biology. S/U or letter grading.

242. Seminar: Microbial Molecular Genetics. (2) Seminar, two hours. Student and instructor presentations and critical discussion of newly emerging concepts in prokaryotic and/or eukaryotic molecular genetics. Exposure to graduate student research topics in areas in which research is being conducted in laboratories and certain societal values may conflict. Concurrently scheduled with course CM134. S/U or letter grading.

CM256. Human Genetics. (4) (Same as Human Genetics CM256.) Lecture, three hours; discussion, two hours. Requisites: Life Sciences 3, 4. Application of genetic principles in human populations, with emphasis on cytogentic, biochemical genetics, population genetics, and family studies. 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.

M261. Molecular and Cellular Immunology. (4) Lecture, four hours. Requisites: Biological Chemistry 254A through 254D. Strongly recommended corequisite: course 298. Comprehensive course for graduate students and selected undergraduate students covering fundamentals and recent advances in molecular and cellular immunology. Lectures supplemented by course 298 seminar, with focus on reading and analysis of primary research articles. Oral presentation required. S/U or 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.

270. Seminar: Molecular Immunology Seminar, two hours. Designed for graduate students. Discussion and student presentations of recent work in molecular virology, including viral gene expression and function. S/U grading.

C274. Advanced Topics in Molecular Parasitology. (2) Lecture, two hours. Requisites: Life Sciences 3, 4. Examination of recent advances in molecular biology of parasites and host/parasite relationship. Specific topics include parasite development, antigenic variation in trypanosomes, RNA editing, prospects for parasitic vaccines. Concurrently scheduled with course C174. Letter grading.

296. Seminar: Advanced 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. Strongly recommended corequisite: course 298. Presentation of student oral critiques and participation in discussions on applied topics. 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 Microbiology in Higher Education. (2) Seminar/discussion/laboratory, two hours. Designed for graduate students. Study of problems and methodologies in teaching microbiology, including workshops, seminars, apprentice teaching, and peer observation. S/U or letter grading.


MIDDLE EASTERN AND NORTH AFRICAN STUDIES

Interdepartmental Program
College of Letters and Science

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Claudia Rapp, D.Phil., Chair

Faculty Committee
Osman M. Galal, M.D., Ph.D. (Community Health Sciences)
Sharon E. Gerstel, Ph.D. (History)
Nouri Gana, Ph.D. (Comparative Literature)
Niles S. Green, Ph.D. (History)
Gill Z. Hochberg, Ph.D. (Comparative Literature)
Michael G. Morony, Ph.D. (History)
Claudia Rapp, D.Phil. (History)
Willeke Z. Wendrich, Ph.D. (Near Eastern Languages and Cultures)

Scope and Objectives
The major and minor in Middle Eastern and North African Studies (MENAS) offer in-depth knowledge and specialized study of this geographic region, its peoples, and its cultures from the end of antiquity to the present. The program also explores the role and influence of this rich cultural heritage around the world. A strong foundation in history is complemented by a wide selection of courses from art history, geography, Near Eastern languages and cultures, political science, and sociology.

The graduate major in this discipline is called Islamic Studies. For details, see the program by that name earlier in this section.

Undergraduate Study
Middle Eastern and North African Studies B.A.

Preparation for the Major

Required: The first-year course in Arabic, Armenian, Hebrew, Persian, or Turkish, or the equivalent level of proficiency as determined by admission into a second-year language course (other languages may be substituted by petition); History 9D; and three lower division courses (at least 12 units) with Middle Eastern or North African content selected from Anthropology 8, 9, Comparative Literature 1A, 1B, 1C, 1D, Economics 1, 2, Ethnomusicology 20B, 91L, 91N, Geography 3, History 20, 21, 22, Near Eastern Languages 50A, 50B, 50C, Political Science 20, 50, Sociology 1.

To enter the major, students must be in good academic standing (minimum overall 2.0 grade-point average) and have completed 45 units and the requirements for the Preparation for the Major.
Transfer Students

Transfer applicants to the Middle Eastern and North African Studies major with 90 or more units must complete as many of the following introductory courses as possible prior to admission to UCLA: one course in Middle Eastern and North African history and three additional courses with relevant content (eligibility of courses to be determined at the introductory counseling meeting).

Refer to the UCLA Transfer Admission Guide at http://www.admissions.ucla.edu/prospect/adm_tr.htm for up-to-date information regarding transfer selection for admission.

The Major

Required: At least 11 upper division courses as follows: (1) three courses at the intermediate or advanced level or the equivalent in the Middle Eastern language taken in lower division, or the equivalent level of proficiency as determined by an examination administered by the department offering the language, (2) History 105A, 105B, 105C, and (3) five elective courses, including courses in three different departments and two courses in a single department, to be selected from Anthropoloy 176, Art History 104A, 104B, 104C, 105E, Economics 111, 112, Ethnomusicology 161L and 161N (both must be taken to equal one 4-unit course), French 121, 160, Geography 187, History, 108A, 116A, 116B, 164B, 164C, 167B. 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 and North African Studies

Upper Division Courses

191A-191B. Variable Topics Research Seminars: Middle Eastern and North African Studies. (4-4) Seminar, three hours. Research seminars on selected topics in Middle Eastern and North African studies. Reading, discussion, and development of culminating project. May be repeated for credit with topic change. Ph/NP or letter grading.

Molecular and Medical Pharmacology

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Christiaan W.J. Schepers, M.D., Ph.D.

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Desmond Smith, M.D., Ph.D.

Ren Sun, Ph.D.

Ligia G. Toro, Ph.D.

Owen N. Witte, M.D. (President’s Professor of Developmental Immunology)

Anna Wu Work, Ph.D.

Hong Wu, M.D., Ph.D. (David Geffen Professor of Medical Research)

Lily Wu, Ph.D.

Omar M. Yagh, Ph.D. (Irving and Jean Stone Professor of Physical Science)

Professor Emeriti

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Timothy R. Donahue, M.D.

Thomas G. Graeber, Ph.D.

Pei Keng, Ph.D.

Huiying Li, Ph.D.

Kwang-Fu Shen, Ph.D.

Michael Van Dam, Ph.D.

Adjunct Professors

James R. Heath, Ph.D.

Barbara A. Levey, M.D. (Rosalinde and Arthur Gilbert Foundation Endowed Professor of Interdepartmental Clinical Pharmacology)

Srinivasar T. Reddy, Ph.D.

Jide Tian, M.D.

Adjunct Associate Professors

Melsheng Jiang, Ph.D.

Jing Liang, M.D., Ph.D.

David B. Stout, Ph.D.

Joy A. Umbach, Ph.D.

Adjunct Assistant Professors

Heather D. Agnew, Ph.D.

Roy Dournani, L.L.D.

Tove Olafsson, Ph.D.

Johannes Czernin, M.D.
Scope and Objectives

The Department of Molecular and Medical Pharmacology has basic and clinical components in which students have opportunities to develop intellectually and experimentally in basic biological sciences placed in the context of human disease. The department conducts integrative teaching and research programs that begin with molecular interactions and extend to studies of diseases and their treatment in humans. Departmental investigators study the biochemistry and pharmacology of drugs, gene expression and its regulation, signal transduction processes, cell-to-cell communication, viral replication and pathogenesis, autoimmune disease, neuronal development and plasticity, and integrated organ functions using techniques of chemistry and structural biology, DNA microarrays, molecular and cellular biology, transgenic and chimeric mice, and cellular and organ imaging. Organic synthesis, genetic engineering, and imaging techniques such as confocal fluorescent and cryoelectron microscopy, autoradiography, and positron emission tomography (PET) are extensively employed. The imaging techniques are available in the Crump Institute for Molecular Imaging, Ahmanson Biological Imaging Clinic, and UCLA-DOE Laboratory of Structural Biology and Molecular Medicine, which are affiliated with the department. The goal of the education program is to provide faculty members and students the opportunity to examine the molecular and clinical basis of disease and the mechanisms of drugs in their treatment, as well as to visualize the changes in the disease state with procedures that monitor the molecular basis of cellular and organ function.

The graduate program seeks to prepare students for these interdisciplinary activities with a basic foundation in genetics, molecular and cellular biology, and pharmacology during their first year in residence. The second year is spent in the laboratory and in elective courses selected to reflect each student's interests, background, and requirements for the research undertaken. Numerous opportunities for interaction with other departments, institutes, and programs are provided through interdisciplinary coursework and many collaborative research activities.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://www.gdnet.ucla.edu/gasasa/library/pgmrqintro.htm. 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 (M.S.) and Doctor of Philosophy (Ph.D.) degrees in Molecular and Medical Pharmacology. The department also offers two M.D./Ph.D. programs concurrently with the 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 Special Training and Advanced Research (STAR) Program in which candidates are post-M.D. 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 Ph.D. or postdoctoral training combined with residency training for veterinarians (with D.V.M. or D.V.M./Ph.D. 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

191A. Drugs: Mechanisms, Uses, and Misuse. (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.

110B. 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.

194. Research Group or Internship Seminars: Cross-Disciplinary Scholars in Science and Technology Project. (4) Seminar, two hours; discussion, two hours. Limited to Cross-Disciplinary Scholars in Science and Technology (CCST) students. Communication and collaborative skills, specifically in interdisciplinary research settings and introduction to research project design and proposal process. Students submit written CSST project proposal and give oral presentations of proposal and of UCLA internship research results. May be repeated for credit. Letter grading.

195. 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. Capping paper or project required. May be repeated for credit. Individual contract required. P/NP or letter grading.

Graduate Courses

200. Introduction to Laboratory Research. (4 to 8) Laboratory, eight to 16 or 16 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. S/U or letter grading.

203. Medical Pharmacology. (2) Lecture, zero to two hours; discussion, zero to two hours. Requisites: courses 211A, 211B. Series of lectures and 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. Enforced requisite: Chemistry 153A with grade of C– or better. Introduction to chemical biology. Topics include chemical biology, utility of synthesis in biochemical research, peptide mimetics, designed reagents for cellular imaging, natural product biosynthesis, protein engineering and directed evolution, cell biology of metals, imaging metal ions in cells, metal-containing drugs. S/U grading.

M205B. Issues on Chemistry/Biology Interface. (2) (Same as Chemistry CM205B.) Lecture, one hour. Requisite: course M205A. Selected talks and papers presented by training faculty on solving problems and utilizing tools in chemistry and molecular biology on chemistry/biology interface (CBI). S/U grading.

211A-211B. Principles of Pharmacology. (4-2) Lecture, three to eight hours; discussion, zero to nine hours. Preparation: mammalian physiology, biochemistry. Systematic consideration of principles governing interaction between drugs and biological systems and of principal groups of drugs 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.


M234C. Laboratory in Toxicological Methods. (2) (Same as Environmental Health Sciences M245 and Molecular Toxicology M245.) Lecture, one hour; laboratory, four to five hours. Survey of experimental techniques used in study of toxic substances. Experiments conducted within known toxic to demonstrate its effects at molecular, cellular, and tissue levels. Presentation of principles of techniques and methods of data analysis at discussion session prior to laboratory. 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 organismal, tissue, cellular, and molecular levels, with emphasis on receptors, receptor/effector coupling, neurotransmitters, cardiovascular pharmacology, autonomic and central nervous system pharmacology. Letter grading.

M241. Introduction to Chemical Pharmacology and Toxicology. (6) (Same as Molecular Toxicology M241.) Lecture, six hours; preparation: organic and biological chemistry. Designed for molecular and medical pharmacology 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.

M248. Introduction to Biological Imaging. (4) (Same as Biomedical Engineering M248 and Biomedical Physics 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.

251. Seminar: Pharmacology. (2) Seminar presented by students, faculty, and guest lecturers on a variety of topics. S/U 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.
Molecular Biology Seminar 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 diseases of topics presented in course M252A. Letter grading.

S257. Introduction to Toxicology. (4) (Same as Pathology M257.) Required coursework: course M241. Biochemical and systemic toxicology, basic mechanisms of toxicology, and regulation of organismic systems. S/U or 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 most targeted by toxin 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 lunch- es with seminar speakers, lead discussions to deconstruct all 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 diseases of topics presented in course M262A. Letter grading.

286. Business of Science: Exploring Entrepreneurship Seminar. (1) Seminar, one hour. Limited to graduate students. Introduction to principles of business and entrepreneurship in technology sectors. Basic business skills and knowledge required to effectively perform in commercial environment and within academic environment that is increasingly involved in industry partnerships. Exploration of entrepreneurship, particularly formation and operation of new business ventures. Presentations by and questioning of successful technology entrepreneurs. Significant aspects of identifying and evaluating new venture opportunities, development of financial, legal considerations, and entry and exit strategies presented and examined through critical discussion. Development of new venture feasibility analysis by students for product of their choice. 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 into an individual. Discussion of molecular basis of disease, gene delivery vectors, and animal models. Letter grading.

291. Special Topics in Pharmacology. (4) Lecture, four hours. Examination in depth of topics of current importance in pharmacology. Emphasis on contributing special interest to advanced Ph.D. candidates and faculty. Letter grading.

293. Nitric Oxide Chemistry, Biochemistry, and Physiology. (2 or 4) Lecture, two or four hours. Basic chemistry, biochemistry, and physiology of nitric oxide and related species, with emphasis on understanding novel mechanisms of nitrogen oxide function as both a physiological and pathophysiological agent/messenger. S/U or letter grading.

298. Seminar: Current Topics in Molecular and Medical Pharmacology. (2) Limited to pharmacology, ACCESS program, and interdepartmental Molecular Biology M252B program students. Students may participate in discussions on assigned topics. S/U or letter grading.

375. Teaching Apprenticeship 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.


Molecular Biology Graduate Course

298. Current Topics in Molecular Biology. (2) Students present/seminar, two hours. Students present oral critiques and participate in discussions on assigned topics. S/U grading.

Molecular Biology

Molecular Cell, and Developmental Biology

College of Letters and Science

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Jau-Nian Chen, Ph.D. (Molecular, Cell, and Developmental Biology)

Steven G. Clarke, Ph.D. (Chemistry and Biochemistry)

Timothy F. Lane, Ph.D. (Obstetrics and Gynecology, Biological Chemistry)

Sabeeka Merchant, Ph.D. (Chemistry and Biochemistry)

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Peter Tontonoz, M.D., Ph.D. (Pathology and Laboratory Medicine)

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Robert B. Goldberg, Ph.D.

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Ann M. Hirsch, Ph.D.

Luisa M. Iruela-Arispe, Ph.D.

David K. Jacobs, Ph.D.

Steven E. Jacobsen, Ph.D.

Utpal Banerjee, Ph.D., Chair

Professors

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Utpal Banerjee, Ph.D. (Irving and Jean Stone Endowed Professor of Life Science)

Jau-Nian Chen, Ph.D.

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Alvaro Sagasti, Ph.D.

Lecturer
Pei-Yun Lee, Ph.D.

Adjunct Professor
Nissim Benesty, M.D., Ph.D.

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 developmental 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 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 Ph.D. 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 B.S.
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 underling 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: Life Sciences 1, 2, 3, 4, 23L; Chemistry and Biochemistry 14A, 14B, 14BL, 14C, 14CL, and 14D, or 20A, 20B, 20L, 30A, 30AL, 30B, and 30BL; Mathematics 3A, 3B, and 3C, or 31A, 31B, and 32A; Physics 1A, 1B, 1C, 4AL, and 4BL, or 6A, 6B, and 6C.

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, 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 at http://www.admissions.ucla.edu/prospect/adm_tr.htm 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 104, 150L, 187A, 198B, 198C, 199B, 199C, or Microbiology, Immunology, and Molecular Genetics 103L; 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, 187B, 187C, 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 153C, 153L, 154, 156, C159A, C159B, CM160A, Ecology and Evolutionary Biology 110, 121, 162, 162L, Human Genetics C144, Microbiology, Immunology, and Molecular Genetics 100L, 101, 102, 103L, 105, 106, CM133, 158, 168, C174, 185A, Physiological Science C126, 166, Society and Genetics 102W.

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 elective 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 preparation for the major course, and at least a 2.0 (C) 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 consult the Student Affairs Office, 2128 Life Sciences, 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.
Molecular, Cell, and Developmental Biology

Lower Division Courses

40. AIDs and Other Sexually Transmitted Diseases. (5) Lecture, three hours; discussion, one hour; experiential service learning, one hour. Biology of HIV blended with socioeconomic problems associated with AIDS. Discussion of contemporary public health approaches to characterizing and addressing of HIV epidemics, as well as of other sexually transmitted diseases. P/NP or letter grading.

50. Stem Cell Biology, Politics, and Ethics: Teasing Apart Issues. (5) Lecture, three and one-half hours; discussion, 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 biomedical potentials. Discussion of history of debate surrounding embryos, as well as various social, ethical, political, and economic aspects of stem cell research. P/NP or letter grading.

60. Biomedical Ethics. (5) Lecture, three hours; discussion, one hour. Examination of importance of ethics in research and exploration of how and why bioethics is relevant to reproductive screening, policy formation, public regulation, and law. Provides foundation in traditional ethics, consideration of subcategories of bioethics, neuroethics, and eugenics, and how to apply ethics to contemporary issues in research and technology. P/NP or letter grading.

70. Genetic Engineering and Society. (4) Lecture, three hours; discussion, two hours. Designed for nonmajors. Not open to students with credit for Life Sciences 3 or 4. Basic principles of genetic engineering. Overview of genetic engineering techniques and relationship of genetic engineering to medicine, agriculture, and society. Emphasis on specific genetic engineering applications to generate discussion on its use in society. Letter grading.

80. Green World: Plant Biology for Now and Future. (5) Lecture, two and one-half hours; laboratory, two hours. Designed for nonmajors. Basic principles of plant biology and introduction to techniques for manipulating plants for improved agriculture, sources of renewable clean energy, reclamation of deforested and nutritionally depleted soils, and biological factories to produce biodegradable plastics, antibodies, and other commodities. Underexploited agriculture crops also featured. P/NP or letter grading.

100. Introduction to Cell Biology. (5) Lecture, three hours; discussion, two hours. Requisites: Life Sciences 3, 4. Corequisite: Chemistry 153A. Not open for credit to Molecular, Cell, and Developmental Biology majors or to students with credit for course M140 or 14B. Introduction to cellular structure, function, and organization of cell, including humans, is controlled by ensembles of neurons, including worms and flies. How do worms decide whether something is good or bad? How do prey detect predators? Scientists now ask these questions. Concurrently scheduled with course CM156 and Microbiology CM156. Lecture, two and one-half hours; laboratory, eight hours. Enforced prerequisite: course C150. Recommended preparation: course 104. Designed for and limited to Molecular, Cell, and Developmental Biology majors for priority pass and first pass. Gene mapping and detection and analysis of genetic variants by means of inheritance patterns. Letter grading.

155. Human Genetics. (4) Same as Human Genetics CM156 and Microbiology CM156. Lecture, three hours; discussion, two hours. Requisites: Life Sciences 3, 4. Application of genetic principles in human populations, with emphasis on cyto genetics, biochemical genetics, population genetics, and family studies. 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. Letter grading.

162. Genetic Control of Animal Behavior. (5) Lecture, three hours; discussion, one hour. Enforced prerequisites: Life Sciences 4, two upper division molecular, cell, or developmental biology or neuroscience courses. How do worms decide whether something smells good or bad? What happens to brain of fruit fly when it is exposed to alcohol? How does fish embryo decide whether to respond to touch by swimming leisurely or rapidly escaping? Behavior of animals, including humans, is controlled by ensembles of neurons that together form neural circuits. Understanding how these circuits work is unifying goal of neurobiology. Physiological 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. Survey of recent primary literature that applies these approaches to three models: olfaction in nematode worms, alcohol-induced behavior in fruit flies, and motor responses in zebralish. Letter grading.

165A. Biology of Cells. (5) Lecture, three hours; discussion, one hour. Requisites: Chemistry 14D or 30B, Life Sciences 3. Not open for credit to students with credit for course 100 or M140. Neurobiology. Introduction to 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 expected of scientists to incorporate concept of scientific method and
recent advances in cell biology research. Exposure in discussions to recent scientific articles that directly relate to the lecture topics leads to useful literature assignments. 165B. Molecular Biology of Cell Nucleus. (5) Lecture, three hours; discussion, two hours. Requisites: course 156A, Chemistry 14D or 30B, Life Sciences 3, 4. Continuation of course 165A. Molecular biology of eukaryotic cells, with focus on structure, organization, 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 dissemination. Exposure to professional literature that currently relates to information examined in lectures. Letter grading.

168. Stem Cell Biology. (5) Lecture, three hours; discussion, one hour. Enforced requisites: courses 138, 165A. Strongly recommended: courses 143, 165B (or Microbiology 132). State-of-art education of embryonic and adult stem cells and how pluripotent/multi- potent 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 other organ systems to provide examples of tissue-specific stem cells and their impact in human disease. Examination of various model organisms as examples of how advances in cell biology have uncovered fundamental principles in stem cell biology. How advances in cell and molecular biology and tissue engineering are used in stem cells in regenerative medicine. Ethical and legal issues related to stem cell research. Letter grading.


172. Genomics and Bioinformatics. (5) Lecture, three hours; discussion, one hour. Requisite: course 144 or course 145B or Molecular Biology 122. Bioinformatics is study of complete repertoire of molecules in cells. Topics include human and yeast genomes and genetic approaches to study of function of individual genes. Studying genomics algorithms of computational biology. Study relationship between nucleotide and protein sequences and their reconstruction of their evolution, use of microarray technologies to measure changes in gene expression, analysis of microarray data including clustering and promoter analysis, proteomics topics including protein expression and interactions, epigenetic study of DNA methylation and chromatin modification, and systems biology, or computational approaches to integrating varied genomic data to gain more complete understanding of cellular biology. Letter grading.

C174A-C174D. Advanced Topics in Cell and Molecular Biology. (2-4) 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. Current developments in field of molecular evolution emphasis on evolutionary trees at molecular level; formal testing of evolutionary hypotheses using sequencing data. Letter grading.

C174B. Molecular Biology of Cell Nucleus. (2) Lecture, two hours. Requisites: courses 100 or C139 or M140, 144. Regulation and function of cell nucleus regulation of cell metabolism. Structure/function relationships, nuclear-cytoplasmic exchange, DNA replication and gene expression. Letter grading.


M175A. Cellular and Systems Neuroscience. (5) Lecture, four hours; discussion, 90 minutes. Requisites: CHE 101A and 101B (or CHEM 101A and 101B) or PHYS 2, Physics 1B or 18B or 6B or 6BH. Not open for credit to students with credit for Physiological Science 111A. For Physiological Science majors only. Grade of C— or better is required to proceed to Physiological Science 111B. Cellular, neuropsychology, 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.

M175B. Molecular and Developmental Neuroscience. (5) Lecture, four hours; discussion, 90 minutes. Requi- sites: CHE 101A and 101B (or CHEM 101A and 101B) or PHYS 2, Physics 1B or 18B or 6B or 6BH. Not open for credit to students with credit for Physiological Science 111A. For Physiological Science majors only. Grade of C— or better is required to proceed to Physiological Science 111B. Cellular, neuropsychology, 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.

M175C. Behavioral and Cognitive Neuroscience. (5) Lecture, four hours; discussion, 90 minutes. Requ- sites: CHE 101A and 101B (or CHEM 101A and 101B) or PHYS 2, Physics 1B or 18B or 6B or 6BH. Not open for credit to students with credit for Physiological Science 111A. For Physiological Science majors only. Grade of C— or better is required to proceed to Physiological Science 111B. Cellular, neuropsychology, 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.

179A. Advanced Independent Research in Molecu- lar, Cell, and Developmental Biology. (4) Laboratory. 12 hours. Requisites: Life Sciences 3, 4, 3.0 prema- tor and major grade-point average, and at least one term of prior experience in same laboratory in which 179A research is to be conducted. Corequisite: course 188A or Microbiology, Immunology, and Molecular Genetic 157A. Enrolled undergraduate students who are interested in pursuing inquiry-based and hypo- thesis-driven research experience in laboratory of departmental faculty mentor. Guided research to be conducted in course 188A, followed by continuation research course 179B. Technical as- pects vary depending on specific laboratory; however, all students learn how to apply scientific method: pro- pose hypothesis, identify experiments to address hy- pothesis, perform experiments, and analyze results. How to record information from experimental activities into laboratory notebooks and to write research pro- posals. Letter grading.

179B. Advanced Independent Research in Molecu- lar, Cell, and Developmental Biology. (4) Laboratory. 12 hours. Requisites: Life Sciences 3, 4, 3.0 prema- tor and major grade-point average, and at least one term of prior experience in same laboratory in which 179A research is to be conducted. Corequisite: course 188A or Microbiology, Immunology, and Molecular Genetic 157A. Enrolled undergraduate students who are interested in pursuing inquiry-based and hypo- thesis-driven research experience in laboratory of departmental faculty mentor. Guided research to be conducted in course 188A, followed by continuation research course 179B. Technical as- pects vary depending on specific laboratory; however, all students learn how to apply scientific method: pro- pose hypothesis, identify experiments to address hy- pothesis, perform experiments, and analyze results. How to record information from experimental activities into laboratory notebooks and to write research pro- posals. Letter grading.

179C. Advanced Independent Research in Molecu- lar, Cell, and Developmental Biology. (4) Laboratory. 12 hours. Requisites: Life Sciences 3, 4, 3.0 prema- tor and major grade-point average, and at least one term of prior experience in same laboratory in which 179A research is to be conducted. Corequisite: course 188A or Microbiology, Immunology, and Molecular Genetic 157A. Enrolled undergraduate students who are interested in pursuing inquiry-based and hypo- thesis-driven research experience in laboratory of departmental faculty mentor. Guided research to be conducted in course 188A, followed by continuation research course 179B. Technical as- pects vary depending on specific laboratory; however, all students learn how to apply scientific method: pro- pose hypothesis, identify experiments to address hy- pothesis, perform experiments, and analyze results. How to record information from experimental activities into laboratory notebooks and to write research pro- posals. Letter grading.

180A-BB. Special Courses in Molecular, Cell, and Developmental Biology. (2-2) Seminar. Two hours each term. Corequisites: courses 179A or 179B or Microbiology 179A; for 188B: course 179B or Microbiology 179B. Departmentally sponsored experimental or temporary courses, such as those taught by visiting faculty members. May be repeated for credit with topic change. Letter grading.

180C. Special Courses in Molecular, Cell, and Developmental Biology. (4) Lecture, five hours. Requi- sites: courses 104 or course 105L, or 184, 184. Departmentally sponsored experimental or temporary courses, such as those taught by visiting faculty members. May be repeated for credit with topic change. Letter grading.

190A-190B-190C. Joint Research Colloquia. (1-1-1) Seminar. Two hours each term. Corequisites: courses 198A or 198B or 199C or 199B or 199B. Limited to ju- niors/seniors. Designed to bring together students un- dertaking supervised tutorial research in model sys- tems. Discussion and presentation of student research work or related work in discipline to encourage more sophisti- cated understanding of most current topics in research fields of students or fields using related model organ- isms. 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. Limited to junior/senior Molecular, Cell, and Developmental Biology majors. Intended for students with strong commitment to pursue graduate studies in molecular, biochemical, physiological, and biomedical fields. Weekly variable topics course discussion, and preparation and presentation of paper selected from current literature. May be repeated once for credit. P/NP or letter grading.

192A. Undergraduate Practicum in Molecular, Cell, and Developmental Biology. (4) Seminar. Three hours; discussion, one hour. 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. Course 192A must be taken for at least two terms and for total of at least 8 units. Individual contract required. In Progress (199A) and letter (199B) grading. Students may elect to enroll in additional research through courses 199C and 199D (letter grading). Report on progress must be presented to department each term 199A through 199D course is taken.

Graduate Courses

M220. Cell, Developmental, and Molecular Neurobiology. (6) Formerly numbered CM220. (Same as Neuroscience 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 neurotropic factors. Letter grading.

C222A-C222D. 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 C174A-C174D. Letter grading.

C222A. Molecular Evolution. (2) Lecture, two hours. Requisites: courses 100 or C139 or M140, 144, Life Sciences 4. Current developments in fields of molecular evolution. Constructing evolutionary trees at molecular level; formal testing of evolutionary hypotheses using sequencing data. Original research proposal required. Letter grading.


C244. Molecular Basis of Vascular Biology. (4) Lecture, four hours. Requisites: Life Sciences 3, 4. Developmental and physiological aspects of vascular biology. Presentation and discussion of key questions of vascular biology with mechanistic viewpoint. Major emphasis on experimental approaches and current research in field. Introduction to several model systems along with presentation of specific topic. Basic information provided as to how this information is obtained. Student must use variety of experimental approaches and model organisms. Letter grading.

C288. Prokaryotic and Eukaryotic Gene Systems. (2) Lecture, two hours. Presentations concerning current areas of research in prokaryotic and eukaryotic gene regulation, organization, transcription, and translation. S/U or letter grading.

M230B. Structural Molecular Biology. (4) Same as Chemistry M230B. Lecture, three hours; discussion, one hour. Requisites: Mathematics 3C, Physics 6C. Selected topics from principles of biological structure; structures of globular proteins and RNA; 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 Chemistry M230D.) Laboratory, 10 hours. Corequisite: course M230B. Methods in structural molecular biology, including experiments utilizing single crystal X-ray diffraction, low angle X-ray diffraction, electron diffraction, optical diffraction, computer filtering, three-dimensional reconstruction from electron micrographs, and model building. S/U or letter grading.

C234. Genetic Control of Development. (4) Same as Genetics C234. Seminar, two hours. Recent developments in fields 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.

C239. Molecular Basis of Plant Differentiation and Development. (4) Lecture, three hours; discussion, one hour. Requisites: Life Sciences 1, 3, 4. In-depth study of basic processes of growth differentiation and development in plants and molecular mechanisms underpinning these processes. Syntopy of plant systems, with focus on developing critical understanding of current experimental basis of research in this field. Concurrently scheduled with course C141. Preparation and ability to function in a research environment, in addition to other coursework, required of graduate students. Letter grading.

C240. Cytokines and Reproductive Biology. (2) (Same as Microbiology M240.) Lecture, 90 minutes; discussion, one hour. Overview of current progress on research in cytokines and other immune system molecules in reproductive biology. S/U or letter grading.

242. Topics in Neurobiology. (4) Lecture, three hours; discussion, one hour. Recent developments in fields of molecular, cell, and developmental biology with mechanistic viewpoint. Major emphasis on experimental approaches and current research in field. Introduction to several model systems along with presentation of specific topic. Basic information provided as to how this information is obtained. Student must use variety of experimental approaches and model organisms. Letter grading.

C250. Plant Communication. (4) Lecture, three hours; discussion, one hour. Preparation required: 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 level, science now recognizes that beyond obvious need to grow above-ground biomass for fuel production, we must better understand how to make 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; synthesis of defense, defense of plant, molecular 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, RNA editing in trypanosome mitochondria, C to U substitution editing 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 or letter grading.

CM256. Human Genetics. (4) Same as Human Genetics CM256 and Microbiology CM256. Lecture, three hours; discussion, one hour. Preparation: Life Sciences 3, 4. Application of genetic principles in human populations, with emphasis on cytogenetics, bio-
chemical genetics, population genetics, and family studies. 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 and 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 Cell Biology and Regenerative Medicine. (4) (Same as Pathology M272.) Lecture, two hours; discussion, two hours. Designed for graduate students. Presentation of current knowledge of embryonic and adult 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.


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 DNA, 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 roles 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 plant development or biochemistry course. Seminar on specific topics in plant development. Content varies each term. S/U grading.

289. Current Topics in Plant Molecular Biology. (2) Discussion, one hour, three hours. Review of recent research developments 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, cell, and developmental biology research. Reading 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.

297. Advances in Molecular Analysis of Plant Development and Plant/Microbe Interactions. (2) Discussion, two hours. Recent advances 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 apprenticeESHIP 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. Designed for graduate students. Study of problems and methodologies in teaching molecular, cell, and developmental biology, including workshops, seminars, apprentice teaching, and peer observation. S/U grading.


597. Preparation for M.A. Comprehensive Examinations or Ph.D. Qualifying Examinations. (2 to 12) Tutorial, to be arranged. May not be applied toward M.A. or Ph.D. course requirements. S/U or letter grading.


Molecular, Cellular, and Integrative Physiology

Interdepartmental Program

College of Letters and Science and David Geffen School of Medicine

UCLA

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Yibin Wang, Ph.D. (Anesthesiology, Physiology)

Nancy L. Wayne, Ph.D. (Physiology)

Scope and Objectives

Physiology is the study of the functional processes that collectively constitute life. The studies usually employ quantitative analyses of normal life processes, of pathological defects in normal life processes, of model systems to clarify and test basic physiological principles, and of functional specializations of organisms that have evolved under the influence of differing selective forces. Thus, physiology contributes importantly to advances in knowledge both in the basic biological sciences and in biomedical sciences and provides an essential foundation for the practice of medicine.

The primary objective of the interdepartmental Molecular, Cellular, and Integrative Physiology Program is to train a new generation of physiologists who apply modern knowledge in molecular and cellular biology and systems physiology to important questions in organismic function. Students learn to conceptualize physiological questions across several levels of organization and to understand how research strategies incorporating each of the levels of analysis can be formulated. This approach to physiology education is responsive to the need for physiologists who can intellectually and technically span disciplines related to physiology that are typically separated.

Coursework consists of formal instruction in the most current information in molecular biology, cell biology, and the molecular and cellular foundations of physiology. In addition, students identify an area of emphasis in biophysics, cellular and molecular biology, or integrative/comparative physiology in which additional studies are pursued. The heart of the program, however, is the research that leads to the dissertation, which is performed under the guidance of a faculty mentor. The program faculty includes more than 60 professors in the David 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, http://www.gdnet.ucla.edu/gasaa/library/pgmrqintro.htm. 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 (Ph.D.) 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.

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: Pathogenic 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.


M252A. Molecular Mechanisms of Human Diseases II. (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. 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 diseases of topics presented in course M252A. Letter grading.

M252A. Molecular Mechanisms of Human Diseases II. (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 neurological, cardiovascular, and metabolic diseases. Letter grading.

M262A. Molecular Mechanisms of Human Disease II. (2) (Same as Pharmacology M262A.) 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 diseases of topics presented in course M262A. Letter grading.

290A-290B-290C. Tutorials. (4-4-4) Tutorial, two hours. Discussion, analysis, and critique of original research literature. Letter grading. 290A. Cellular and Molecular Physiology; 290B. Biophysics; 290C. Integrative and Comparative Physiology.

296. Research Seminar. (2) Seminar, to be arranged. Review of literature, discussion of original research, and analysis of current topics in molecular, cellular, and integrative physiology. May not be applied toward Ph.D. course requirements. 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 not be applied toward Ph.D. course requirements. May be repeated for credit. S/U grading.

596. Directed Individual Study or Research. (2 to 10) Tutorial, to be arranged. May be repeated for credit. S/U or letter grading.

597. Preparation for Ph.D. Qualifying Examinations. (2 to 10) Tutorial, to be arranged. May not be applied toward Ph.D. course requirements. May be repeated for credit. S/U grading.

599. Research for Ph.D. Dissertation. (2 to 10) Tutorial, to be arranged. May not be applied toward Ph.D. course requirements. May be repeated for credit. S/U grading.

Molecular Toxicology

Interdepartmental Program School of Public Health UCLA

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Scope and Objectives

Faculty from a variety of departaments and schools at UCLA, including Biological Chemistry, Chemistry and Biochemistry, Environmental Health Sciences, Epidemiology, Medicine, Molecular and Medical Pharmacology, and Pathology and Laboratory Medicine, have joined forces to create an interdisciplinary graduate program in Molecular Toxicology that is administered through the School of Public Health. Specialties within the program include, but are not limited to, neurotoxicology, nanotoxicology, immunotoxicology, reproductive and developmental toxicology, genetic toxicology, toxicokinetics and metabolism, genetics and molecular biology, carcinogenesis, and environmental toxicology. 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 society 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 discipline of toxicology, which seeks to characterize 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 understand the basis of toxicity 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 basic chemical and biological sciences.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://www.gdnet.ucla.edu/gasaa/library/pgmrqintro.htm. 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 (Ph.D.) degree in Molecular 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 students, emphasizing drug development and mechanisms 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 community (students, postdoctoral fellows, and faculty) and deals with topics relevant to molecular toxicology. In Progress (211A, 211B) and SU (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 pharmacology 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; discussion, one hour. Preparation: undergraduate biology and chemistry courses. Requisite: Environmental Health Sciences C240. Examination of recent literature on mechanisms of toxicity or toxicodynamics. Student specialization in the study of toxicity or toxicodynamics.
presentation of papers selected by instructor on various aspects of toxic mechanisms, including free radical mechanisms, mechanisms of cell death, metal toxicity, homeostasis, intracellular pH and calcium regulation, stress and adaptive pathways, DNA repair/mutation, carcinogenesis, and teratogenesis. Discussion of various papers. S/U or letter grading.

M245. Laboratory on Toxicological Methods, (2) (Same as Environmental Health Sciences M245 and Pharmacology M234C.) Lecture, one hour; laboratory, four to five hours. Survey of experimental techniques used in study of toxic substances. Experiments conducted with known toxins to demonstrate its effects at molecular, cellular, and tissue levels. Presentation of principles of techniques and methods of data analysis at discussion session prior to laboratory. Letter grading.

M246. Molecular Toxicology, (4) (Same as Environmental Health Sciences M246.) Lecture, four hours. Examination of fundamental aspects of toxicology required for deep understanding of toxicological processes, with research-oriented outlook. Dissemination of information about both new and classic toxicological topics to make students think about them from research perspective. Students learn about cutting-edge research areas of molecular toxicology, how to most optimally extract important information from research papers, how to critique papers, how to formulate alternative hypotheses for data in papers, how to formulate ideas for future research, and how to express their ideas effectively in oral and written formats. Letter grading.

296A-296G. Research Topics in Molecular Toxicology. (2 each) Research group meeting, two hours. Advanced study and analysis of current topics in molecular toxicology. Discussion of current research and literature in research specialty of faculty member teaching course. S/U grading:

296A. Chemical Toxicology.
296B. Molecular Carcinogenesis.
296C. Teratogenesis.
296D. Molecular Topics in Boron Biology.
296E. Germ Cell Cytogenetics/Genetic Biomarkers.
296F. Genetic Toxicology.
296G. Laboratory Analysis.

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 12) Tutorial, four hours. May be repeated toward degree course requirements. May be repeated for credit. S/U or letter grading.

597. Preparation for Ph.D. Qualifying Examinations. (2 to 12) Tutorial, four hours. May be repeated toward degree course requirements. May be repeated for credit. S/U grading.

599. Ph.D. Dissertation Research. (8 to 12) Tutorial, to be arranged. Individual guided studies under direct faculty supervision. May not be applied toward degree course requirements. May be repeated for credit. S/U or letter grading.

Moving Image Archive Studies

Interdepartmental Program
Graduate School of Education and Information Studies and School of Theater, Film, and Television

UCLA
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Leah A. Lievrouw, Ph.D., Chair

Faculty Committee
Allison N. Field, Ph.D. (Film, Television, and Digital Media)
Jan-Christopher Horak, Ph.D. (Film, Television, and Digital Media)
Leah A. Lievrouw, Ph.D. (Information Studies)
Ellen J. Pearlstein, M.A. (Information Studies)
Steven Ricci, M.A., Ph.D. (Film, Television, and Digital Media, Information Studies)

Scope and Objectives

The Moving Image Archive Studies Program M.A. is an interdepartmental degree program offered jointly by the Department of Information Studies in the Graduate School of Education and Information Studies and the cinema and media studies faculty of the Department of Film, Television, and Digital Media in the School of the Theatre, Film, and Television. The program is an intensive, specialized two-year course of study consisting of graduate seminars, directed studies, and an extensive practicum program, as well as special topic screenings, guest lectures, and technical demonstrations. The program is also affiliated with the UCLA Film and Television Archive.

The goal of the program is not merely training, but a broad education grounded in historical, critical, and theoretical study. The subject matter encompasses the aesthetics and history of film and television, the cultural responsibilities of selection and curatorship, access and programming for the public, collection management, cataloging and documentation, and technical aspects of preservation and restoration. Seminars and practica are taught by a combination of UCLA faculty members, academic scholars, top-level preservationists, and other archive specialists.

The program recognizes that traditional models of archival work have been redefined in recent years to emphasize moving image preservation as an ongoing process of activities along a continuum that includes curatorship, laboratory preservation, storage management, cataloging, and access. The program encourages familiarity with all these closely related archival functions and provides opportunities for specialization within them.

A key goal is to link theory with practice. The program embraces hands-on practice in archives, libraries, studios, and laboratories in the Los Angeles area, as well as nationally and internationally.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://www.gdnet.ucla.edu/gasaalibrary/pgmrqintro.htm. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degree

The Moving Image Archive Studies Program offers the Master of Arts (M.A.) degree in Moving Image Archive Studies.

Moving Image Archive Studies

Graduate Courses

200. Moving Image Archiving: History, Philosophy, Practice. (4) Seminar, four hours. Introduction to historical development of moving image archives. Critical analysis of archival policies regarding collection development, access, exhibition, cataloging, preservation, and restoration. Introduction to principle models and methodologies of moving image archive practices from 1938 establishment of International Federation of Film Archives to the present, addressing practices such as collection development of classical, national, regional, and nonmainstream materials (small gauge formats, independent and amateur productions, new media); changing role of technology in preservation and restoration; ethics of moving image restoration; cataloging standards and documentation systems; classical and alternative models of archive administration and funding; cultural impact of public programming; research and publication supported by moving image archives; access, education, and archival productions. S/U or letter grading.

210. Moving Image Preservation and Restoration. (6) Seminar, four hours. Critical analysis of distinct models for archival preservation and restoration of moving image media. Examination and evaluation of current preservation standards, procedures, and duplications. Discussion of critical preservation problems such as nitrate deterioration, color fading, vinegar syndrome, and irreversible prints. Exploration of case studies of specific restoration projects through critical before and after studies, with focus on crucial ethical issues embedded within each technical and aesthetic decision facing restorers. Of special interest is question of whether it is possible and appropriate to speak of particular schools and/or philosophies of restoration. Range of key issues addressed, such as identification of original versus subsequent and multiple versions and theoretical and practical distinctions between different types of restoration. S/U or letter grading.

220. Archaeology of Media. (4) Seminar, four hours. History of moving image technologies. Examination of relationship between technological evolution and forms of moving image expression. Lectures combined with extensive presentations of full range of analog, video, and digital image types to train students to develop discerning eye required for professionals working in 21st-century moving image archive. In addition to study of specific technical developments such as new gauges, formats, color processes, aspect ratios, films stocks, and projection systems, exploration of larger economic and industrial forces behind them. Study of aesthetic consequences of specific production and exhibition innovations by examining different types of images, genres, and narratives that accompany and influence passage of new technologies. S/U or letter grading.

230. Moving Image Cataloging. (4) Seminar, four hours. Introduction to methodologies and standards specific to moving image cataloging. Discussion and
debate of continued application of Library of Congress subject headings and genres to cataloged moving image materials. Exposure to variety of indexing languages used today within online environments and practical training in application of cataloging principles to motion pictures and television programs. Survey of general theories and alternate documentation practices at work within field as well as specific cataloging rules established by FIAF for local and national moving image archives. Discussion of important issues of public access, exploring various methods and protocols for making collection-related information available through secondary and nonsystematic channels such as study guides, collection profiles, Websites, stand-alone databases, and exhibition catalogs. Letter grading.

240. Archival Administration. (4) Seminar, four hours. Day-to-day administration of moving image archives involves complex set of interrelated activities, including donor relations, deposit agreements, and application of copyright law; collection identification and cataloging; storage, conservation, and preservation of moving image materials; budget planning, fundraising, and grant writing; staff training and supervision; programing, education initiatives, and Internet access. Analysis of interrelationship between administrative policies, budgets, human resources, and overall archival goals. Through discussions with working archival professionals, exploration of these essential tasks with particular attention to rapidly changing paradigms brought about by migration of media into digital realm. S/U or letter grading.

250. Access to Moving Image Collections. (4) Seminar, four hours. Survey and analysis of policies and procedures used to provide access to moving image collections. Identification and exploration, through lecture and discussion, of three distinct modes of public access: traditional access, public exhibition, and public access, S/U or letter grading.

298. Special Topics in Moving Image Archive Studies. (2 to 4) Seminar, two to four hours. Variable topics related to scholarship and practice in moving image archive studies. Letter grading.

498. Individual Directed Studies: Practicum in Moving Image Archiving. (2 to 8) Tutorial, 12 hours. Hands-on experience at entry professional level in archive, library, information center, or media laboratory supervised by one archivist or other appropriately qualified professional and one program faculty member. S/U grading.

596. Directed Individual Study or Research. (2 to 6) Tutorial, four hours. Study or research in areas or subjects not offered as regular courses. S/U or letter grading.

**MUSIC**

School of the Arts and Architecture

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Michael E. Dean, M.M., Chair

Professors

Roger Bourland, Ph.D.
Kenneth E. Burrell, B.A.
Vladimir Chernov, M.M.
Paul S. Chia, Ph.D.
Julianna K. Gondek, M.M.
Gary G. Gray, M.M.
Gordon Henderson, M.M.E.
Peter O. Kruse, J.D.
Ian Krouse, D.M.A.
D. Thomas Lee, D.M.A.
Jens H. Lindemann, M.M.

Antonio Lysey
Vitaly Margulis, M.M.
Donald Neuen, M.A.
Movses Pogossian, D.M.A.
Walter Poncé, D.M.A.
Neal H. Stulberg, M.A.
Guillaume B. Suret, M.M.
Robert S. Winter, Ph.D. (Presidential Professor of Music and Interactive Arts)

Professors Emeriti

Elaine R. Barkin, Ph.D.
Paul E. Des Marais, M.A.
Maurice Gerow, Ph.D.
Frederick F. Hammond, Ph.D.
Thomas F. Harmon, Ph.D.
Henri Lazarof, M.F.A.
Paul V. Reale, Ph.D.
Jon Robertson, D.M.A.
Roy E. Travis, M.A.

Associate Professors

Michael E. Dean, M.M.
Frank Heuser, Ph.D.
David S. Lefkowitz, Ph.D.

Senior Lecturers S.O.E.

Sheridon W. Stokes
Paul O. Tanner, Ph.D., Emeritus

Lecturers S.O.E.

Maureen D. Hooper, Ed.D., Emerita

Senior Lecturer

John L. Hall, M.M., Emeritus

Lecturers

Gloria C. Cheng
Chris J. Cooper
Jordan H. Davis, D.M.A.
Margaret M. Flanagan Lyse
Rakefet H. Hek, M.M.
Kanae Matsumoto
James T. Miller
Lou Anne Neil, M.A.
Richard O'Neil, M.A.
Mitchell T. Peters, M.M.
Jean-Louis Rodrigue
Patrick R. Sheridan, M.A.
John A. Steinmetz, M.A.

Adjunct Professors

Christopher Hanulik, B.M.
Douglas H. Masek, D.M.A.

Adjunct Associate Professors

Christoph Bull, D.M.A
Mark C. Carlson, Ph.D.
Jennifer Judkins, Ph.D.
Jennifer L. Snow, D.M.A.
Peter F. Yates, D.M.A.

Adjunct Assistant Professor

Judith I. Hansen, B.A.

**Scope and Objectives**

The Department of Music provides undergraduate and graduate training in Western classical music, with concentrations in composition, music education, and performance. Jazz performance is also offered at the graduate level. The department is aligned with the Departments of Ethnomusicology and Musicology and aspires to promote productive collaboration between performance and scholarship, a cross-cultural global understanding of the art of music, and preparation for and execution of their senior recitals. Through preparatory 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 B.A.**

**Capstone Major**

**Admission**

All applicants for admission and change of major are required to pass an audition in their principal performing medium.

**Preparation for the Major**

**Required (for all concentrations except music education):**

Music 20A, 20B, 20C, with grades of C or better; 12 units from courses 60A through 65; 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 20A, 20B, 20C, with grades of C or better; 12 units from courses 60A through 65; 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; Ethnomusicol-
og 20A or 20B or 20C. 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.

The Major
Required (for all concentrations): Music 120A, 120B, 120C, 140A, 140B, 140C, with grades of C or better, and courses selected from one of the concentrations listed below.

Composition: A minimum of 41 upper division units, including Music 104A or 104B, 106A, 106B, 116, 123A, 123B, 123C, and 127B, and at least 8 elective units selected from courses 104A or 104B (if not already taken), 117, C118A, C118B, additional terms of 123A, 123B, 123C, 124A or 124B or 124C (if not already taken), 197. Ethnomusicology 111, 136A, C136B, 146, C156A, 156B, 157, 158A, 158B, 158C, 160, 170, 181. A capstone senior recital, to be preceded by one capstone scoring course (Music 124A or 124B) and to include at least 30 minutes of original music, is also required (exceptions by petition only).

Music Education: A minimum of 37 upper division units, including Music 101A, 100B, 100C, 110, 111A, 111B, 114A, 114B, 114C, 114G, 114H, 114I; 114D and 114F (or 119); 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 (Music C175); 4 units of elective courses from 106B, 116, 117, C118A, C118B, 197. Ethnomusicology M108A, 108B, 120A, 120B, 121, 170, Music History 130, 135A, 135B, 135C, 191A through 191G; and one upper division elective course in music. 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, http://www.gdnet.ucla.edu/gasasa/library/pgmqrintro.htm. 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 (M.M.) degree, Doctor of Musical Arts (D.M.A.) degree, and Master of Arts (M.A.) Candidate in Philosophy (C.Phil.), and Doctor of Philosophy (Ph.D.) 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. Required: 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.
4A-4B. 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. Fundamentals of singing techniques, including vocal mechanism, posture and breathing, musical warm-ups, optimal vocal production, diction, and performance delivery to be put into practice in classroom study, vocal exercises, and performances. Final recital with piano accompaniment required. May be repeated for maximum of 12 units with a grade of C in each course. Letter grading.
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. Designed to inspire and inform those interested in movie music. Offered in summer only. P/NP or letter grading.
8G. Graduate Piano Sight-Reading. (2) Studio, two hours; preparation, two hours. Limited to graduate students. Designed to enable entering graduate students remedy entrance deficiencies, to be cleared by examination. May be repeated. S/U grading.
M10A-M10B-M10C. Introduction to Music: History, Culture, Creativity. (5-5-5) Same as Ethnomusicology M7A-M7B-M7C and Music History M10A-M10B-M10C. Lecture, four hours; laboratory, three hours. Preparation: placement examination. Course M10A is enforced requisite to M10B, which is enforced requisite to M10C. Students must receive grade of C or better to proceed to next course in sequence. Introduction to study of music from three complimentary perspectives: its history, relation to culture, and creative structuring. Lectures from musicologists, ethnomusicologists, and composers/theorists combined with small sections in which students develop wide range of musicianship skills. Organized around broad ideas (performance, multi-velocity, time, place, and more) where creative and cultural implications are explored through analysis and discussion of broad repertoire of musical works spanning historical eras and global cultures. Compositional exercises, production of short compositions, and short papers dealing with historical and cultural issues required. Letter 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, performances, recordings. Relationship of listening to theoretical, analytical, historical, and cultural frameworks. Music as aesthetic experience and cultural practice. P/NP or letter grading.
20A. Music Theory I. (3) Lecture, four hours. Preparation: passing score on departmental examination. Course 20A is enforced requisite to 20B, which is enforced requisite to 20C. Students must receive grade of C or better to proceed to next course in sequence. Theory: species counterpoint through fifth species; description of triads and inversions. P/NP or letter grading.
20B. Music Theory II. (3) Lecture, four hours. Enforced requisite: course 20A with grade of C or better. Theory: diatonic harmony through secondary dominants and diminished sevenths; modulations to dominant and relative keys; writing of four-part chorales; style composition in baroque dance forms; introduction to figured bass notation. P/NP or letter grading.
20C. Music Theory III. (3) Lecture, four hours. Enforced requisite: course 20B with grade of C or better. Theory: chromatic harmony; harmonic development of tonality, 1800 to 1850; appropriate analysis and style composition. P/NP or letter grading.
60A-65. Undergraduate Instruction in Performance (2 each) Studio, one hour. Limited to Music majors (all freshmen/sophomore majors, and junior/senior majors not in performance specialization). Individual instruction. Students must perform in one practice each quarter. Courses are assigned by applied instructor in Fall and Winter Quarters and by jury examination in Spring Quarter. May be repeated for credit. P/NP or letter grading. 60A. Violin; 60B. Violin. 60C. Cello; 60D. String Bass; 60E. Harp; 60F. Classical Guitar; 60G. Viola da gamba; 60K. Lute. 61A. Flute; 61B. Oboe; 61C. Clarinet; 61D. Bassoon; 61E. Saxophone; 62A. Trumpet; 62B. French Horn; 62C. Trombone; 63D. Tuba; 63E. Percussion. 64A. Piano; 64B. Organ; 64C. Harpsichord; 65. Voice.
80A. Beginning Keyboard. (4) Laboratory, five hours; preparation/practice, seven hours. Simple keyboard skills together with basic aspects of music theory and its practical application to keyboard: sight-reading, tonality, chords, scales, cadences, simple compositions, and improvisations. Offered in summer only. P/NP or letter grading.
80B. Intermediate Keyboard. (4) Laboratory, five hours; preparation/practice, seven hours. Enforced requisite: course 80A. Review of basic keyboard concepts, with focus on developing comprehensive keyboard musicianship related to sight-reading, composing, improvising, analysis of form, study of musical terms and notations, chords, scales, cadences, transposing, and ear training. Offered in summer only. P/NP or letter grading.
80F. Beginning Guitar Class. (4) Laboratory, five hours; preparation/practice, seven hours. Introduction to guitar techniques, accompanying, and arranging for guitar; coverage of note reading and tablature. Offered in summer only. P/NP or letter grading.
80V. Vocal Technique for Beginners. (4) Laboratory, six hours; preparation/practice, six hours. Voice instruction for singers at beginning to intermediate level. Exploration of fundamentals of vocal technique, including overview of basics of proper breath control, resonance, care of voice, diaphragm, and interpretation. Begin- ning vocal repertoire used as vehicle for understanding these concepts. Offered in summer only. P/NP or letter grading.
80W. Woodwind Technique for Beginners. (4) Lab- oratory, six hours; preparation/practice, six hours. Woodwind instruction designed to give students knowledge of fundamental concepts and techniques of saxophone, clarinet, oboe, bassoon, and flute. Offered in summer only. P/NP or letter grading.

M87. Special Courses in Music. (5) Same as Ethnomusicology M87 and Music History M87. Lecture, four hours; discussion; four hours. Limited to under-graduate Ethnomusicology, Music, and Music History majors. Study and analysis of current and 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.

90A. UCCLA Chorale. (2) Activity, four hours. Prepara-
tion: audition. Select mixed ensemble of no less than 15 voices performing choral music appropriate for concert chorus ensemble, with emphasis on music after 1700. May be repeated with consent of instructor. May be concurrently scheduled with course C480. P/NP or letter grading.

90B. University Chorus. (2) Activity, two hours. Prepar-
aid. audition. Mixed choirs of 50 to 150 voices performing medium- and concert-length choral works from baroque to present. University Chorus performs only as part of Choral Union, large chorus made up of all choral ensembles. May be repeated for credit without limitation. P/NP or letter grading.

90C. Chamber Singers. (2) Activity, three hours. Prepara-
tion: audition. Select mixed ensemble of 16 to 20 voices performing chamber music of all periods, with emphasis on Renaissance and baroque mu-
sic. May be repeated for credit without limitation. P/NP or letter grading.

90D. Opera Workshop. (2) Activity, six hours. Prepara-
aid. rehearsal. Rehearsal and performance of scenes and complete operas, as well as repertoire, stage movement, and foreign language diction coaching. May be repeated for credit without limitation. P/NP or letter grading.

90E. Symphony Orchestra. (2) Activity, four hours. Prepara-
aid: audition. Group performance of symphonie literature, as well as orchestral accomplishment for operatic and major choral works. May be repeated for credit without limitation. May be concurrently scheduled with course C481. P/NP or letter grading.

90F. Symphonic Band. (2) Activity, two hours. Prepara-

90G. Wind Ensemble. (2) Activity, four hours. Prepara-
aid: audition. Group performance of concert litera-
ture for wind ensemble. May be repeated for credit without limitation. May be concurrently scheduled with course C482. P/NP or letter grading.

90L. Music Theater Workshop. (2) Activity, six hours. Prepara-
aid: audition. Rehearsal and performance of scenes and complete musical theater productions, in-
cluding repertoire and stage movement coaching. May be repeated for credit without limitation. P/NP or letter grading.

90M. Marching and Varsity Bands. (2) Activity, four hours. Preparation: audition. Group performances of special band arrangements for football and basketball games as well as special events. May be repeated for credit without limitation. P/NP or letter grading.

90N. Jazz Band, three hours. Prepara-
aid: audition. Group performance of jazz and pop-
ular music in ensembles of 20 to 30 instruments. May be repeated for credit without limitation. P/NP or letter grading.

90P. Alexander Technique. (2) Lecture, four hours; outside preparation and practice, two hours. Limited to Music majors. Introduction to principles of Alexander technique. Study of musician's postural attitude at in-
strument. Designed to help instrumentalists and vocalists prevent injuries and performance and may be repeated with consent of instructor. Letter grading.

90Q. PIANO/Keyboard Accompaniment. (2) (For-
merly numbered 90Q.) Activity, four hours; outside study, two hours. Study with large ensembles, instrumen-
talists, and/or vocalists in role of accompa-
nists. Performance includes, but is not limited to, les-
sions, rehearsing, performance programs, master classes, concerts, auditions, juries, and recital-
s. May be repeated for credit without limitation. Con-
currently scheduled with course C484. P/NP or letter grading.

90R. Guitar Accompanying. (2) Activity, four hours; outside study, two hours. Collaboration with instrumen-
talists and/or vocalists in role of accompanists. Perfor-
mane includes, but is not limited to, lessons, rehears-
as, special studio performance projects, master class-
es, concerts, auditions, juries, and recitals. May be repeated for credit without limitation. P/NP or letter grading.

90S. Harp Accompanying. (2) Activity, four hours; outside study, two hours. Collaboration with instrumen-
talists and/or vocalists in role of accompanists. Perform-
ance includes, but is not limited to, lessons, rehears-
as, special studio performance projects, master class-
es, concerts, auditions, juries, and recitals. May be repeated for credit without limitation. P/NP or letter grading.

90T. Early Music Ensemble. (4) (Same as Music History C190T.) Activity, four hours. Preparation: audi-
tion. Group performance of Western vocal and instru-
mental music from historical periods prior to 1800. Early
-study may be used at instructor's discretion. May be repeated for credit without limitation. P/NP or letter grading.

Upper Division Courses

100A-100B-100C. Music in American Education. (4-4-4) Lecture, four hours; laboratory, one hour. Re-
um, and literature for elementary and secondary schools in American education. Each course may be taken independently for credit. Letter grading. 100A. General Music; 100B. Choral Music; 100C. Instrumental.

104A. Modal Counterpoint. (3) Lecture, three hours. Requir-
e: course 120C (accelerated section). In-depth exploration of styles and techniques of counterpoint of 13th and 16th centuries through writing and analysis of important forms of period, including species, canon, free counterpoint, canunt, firmus, point of imitation, motet, ricercare, etc. Letter grading.

104B. Special Topics in Counterpoint. (3) Lecture, three hours. Requisites: course 120C (accelerated sec-
tion). In-depth exploration of polyphonic styles and tex-
tures 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. Ranges and characteristics of instruments, with exer-
cises 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 or-
chestra. P/NP or letter grading.

110. Learning Approaches in Music Education. (4) Lecture, four hours; laboratory, one hour; outside study, eight hours. Introduction to concepts and skills central to teaching music. Exploration of three modes of music learning: learning through notation, oral transmission, and imitation. Study of improvisation and communal composition using clarinet and guitar. Evaluation of ex-
periences in context of major learning theories. Letter grading.

111A. Technology in Music Education I. (1) Labora-
tory, three hours. Requisite or corequisite: course 20A. Provides music educators with tools and knowledge necessary to use appropriate computer hardware and software for purposes of music education, including music composition, 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. Activities include fa-
miliarization with computer systems and software, computer-assisted music notation and publication, and development of basic sequencing techniques. Letter grading.

111B. Technology in Music Education II. (1) Lab-
ortory, three hours. Requisite: course 111A. Introduc-
tion to instructional uses of computers in music class-
rooms, with emphasis on practical information neces-
sary to intelligent music educators to implement microcomputers in schools, including training in ar-
ranging, multimedia production, and classroom in-
struction techniques. Additional topics include teacher-
based, administrative, instructional, and educational develop-
ment techniques. 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 subject certification in music. Novice teachers work under di-
rect guidance of UCLA music education faculty mem-
bers and practicing public school instructor to develop and maintain a teaching assignment in K-12 settings. P/NP grading.

114A-114L. Study of Instrumental and Vocal Techni-
iques. (1 each) Studio, three hours. Requisite or corequisite: course 20A. Applied studies in basic per-
formance techniques and tutorial materials. Each of course 114A through 114L is offered as either P/NP or letter grading. Letter grading.

114A. Advanced Choral Conducting. (2) Formerly numbered 119A.) Lecture, one hour; studio, two hours. Requisites: courses 116, 117. Conducting ba-
sics, baton technique, beat patterns, dynamics, score preparation and analysis. May be repeated once for credit. Concurrently scheduled with course C218A. P/NP or letter grading.

118A. Advanced Choral Conducting. (2) (Former-
ly numbered 118A.) Lecture, one hour; studio, two hours. Requisites: courses 116, 117, 118A. Vocal and choral pedagogy, vocalizing and warm-up tech-
niques, and rehearsal and audition techniques. May be repeated once for credit. Concurrently sched-
uled with course C218B. P/NP or letter grading.

119. Vocal Techniques for Music Education. (2) Lab-
oratory; three hours; outside study, three hours. In-
troduction to art of teaching voice, including anatomy of singing instrument, biomechanics of singing, diag-
nosis and correction of faults, health and care of voice, and instrumental techniques. Letter grading.

120A. Music Theory IV. (4) Lecture, four hours; dis-
cussion, four hours. Preparation: passing score on de-
partmental first-year examination. Requisite: course 20C with grade of C (2.0) or better. Theory: baroque counterpoint including counterpoint and canons, modal harmony including development of harmony from 1850; analytical projects; style composition. Musicianship: advanced score reading; 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 chromatic har-
mony including development of harmony from 1850; analytical projects; style composition. Musicianship: advanced score reading; advanced harmonic dictation; preparation for departmental examination. P/NP or letter grading.

120C. Music Theory VI. (4) Lecture, four hours; dis-
cussion, four hours; laboratory, one hour. Requisites: course 120B with grade of C (2.0) or better. 20th-cen-
tury harmonic language, including nonfunctional har-
mony, 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 minimalism and schools to ideological or stylistic concerns. May be repeated once for credit. P/NP or letter grading.

476 / Music

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 and others. Contextual 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.

124A. Scoring for Symphony Orchestra. (4) Discussion, three hours. Requisites: courses 106B, 120C (accelerated section), 123C. Practical activities in scoring for symphony orchestra. Preparation and production of parts. Each partial may include percussion. At least one reading by UCLA Philharmonia Orchestra scheduled. Letter grading.

124B. Scoring for Wind Ensemble. (4) Discussion, three hours. Requisites: courses 106B, 120C (accelerated section), 123C. Practical activities in scoring for large wind ensembles. Preparation and production of scores. Each partial may include percussion. At least one reading by UCLA Wind Ensemble scheduled. Letter grading.

124C. Scoring and Arranging for Choral Ensemble. (4) Discussion, three hours. Requisites: 106B, 120C (accelerated section), 123C. Practical activities in scoring and arranging for choral ensembles, including a capella as well as choral 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. Historical survey of major works from music theater, early forms to 1900; 1900 to 1920; 1920 to 1945; 1945 to present. Enforced requisite: course C404A, 64A, 64B, or 164C. In-depth study of selected topics in keyboard literature, concentrating on problems of performance through analysis, historical and comparative studies, and actual performances by past masters.student may be concurrently scheduled with course C267. P/NP or letter grading.

174. Vocal Diction. (2) Lecture, two hours; outside study, four hours. Designed 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.

175. Chamber Ensembles. (2) Activity, two 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 C267. P/NP or letter grading.

176. Electronic Music Composition. (4) Lecture, three hours; laboratory, three hours. Preparation: advanced experience and accomplishment in serious composition (art music), two years of music theory, Limited to majors. Experiences in electroacoustic orchestration, meta-pitch composition, notation software (Sibelius), sequencing and scoring software (Logic), text collages (ProTools), and final project. May be concurrently scheduled with course C226. P/NP or letter grading.

177. Gluck Chamber Ensembles. (2) Studio, two hours. Preparation: audition. 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 C477. P/NP grading.

188. Special Courses in Music. (4) Lecture, three hours; outside study, nine hours. Special topics in music. May be concurrently scheduled with course C225. P/NP or letter grading.

195. Community or Corporate Internships in Music. (2 or 4) Tutorial, six hours. Limited to juniors/seniors. Internship in subject area or 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 grading.

197. Individual Studies in Music. (2 or 4) Tutorial, one hour. Preparation: 3.0 grade-point average. Limited to seniors. Individual study of music, with scheduled meetings to be arranged between faculty member and student. Tangible evidence of mastery of subject matter (research project) required. May be repeated for maximum of 8 units. Individual contract required. P/NP or letter grading.

Graduate Courses

M201. Repertory and Analysis. (2) (Same as Musicology M201.) Seminar, two hours. Requisite or corequist: Musicology 202. In-depth study of 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 music performance students. Students perform music using performance techniques and approaches required of professional performers, including phrase structure, 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 music performance students. Students perform music using performance techniques and approaches required of professional performers, including phrase structure, harmonic rhythm and prolongation, small and large forms, theories of musical coherence, and understanding of styles. Letter grading.

218A. Advanced Choral Conducting. (2) Lecture, one hour; studio, two hours. Requisites: courses 116, 117, C218A. Vocal and choral pedagogy, vocalizing and warm-up techniques, diction, and rehearsal and audition techniques. May be repeated once for credit. Concurrently scheduled with course C118A. Letter grading.

218B. Choral Techniques and Methods. (2) Lecture, one hour; studio, two hours. Requisites: courses 116, 117, C218A. Vocal and choral pedagogy, vocalizing and warm-up techniques, diction, and rehearsal and audition techniques. May be repeated once for credit. Concurrently scheduled with course C118B. Letter grading.

222. 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 period. May be repeated once for credit. May be concurrently scheduled with course C118A. Letter grading.

225. Historical and Philosophical Foundations of Music Education. (4) Discussion, 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 C115. May be repeated once for credit. May be concurrently scheduled with course C225. P/NP or letter grading.

226. Electronic Music Composition. (4) Lecture, three hours; laboratory; three hours. Preparation: advanced experience and accomplishment in serious composition (art music), two years of music theory. De-
signed for graduate students. Limited enrollment. Exercises in electroacoustic orchestration, meta-pitch composition, notation software (Sibelius), sequencing, and film scoring software (Logic), text collages (ProTools), and final project. May be concurrently scheduled with course C176. S/U or letter grading.


254. Advanced Music Analysis: Pre-Tonal Music. (4) Seminar, three hours. Designed to provide graduate composition students with in-depth exposure to complex aspects of sonata alLEGRO forms of the late Middle Ages through the end of baroque era. Exploration 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.


256. Advanced Music Analysis: Post-Tonal Music. (4) Seminar, three hours. Designed for graduate music students. Discussion of theoretical approaches to and analysis of selected works of 20th or 21st century. Analysis of assigned pieces using various theoretical approaches discussed and presentation of analyses in class. Letter grading.

260A. Seminar: Composition for Motion Pictures and Television. (6) Seminar, three hours; laboratory, three hours. Practical experience in composing for commercial movies. Difference between underscore and source music and discussion of surrealistic effect when underscore is供应商. Exploration of the use of visual cues in montages. Study of three principal areas of filmmaking — production, postproduction, and digital production. Examples from classic movies and discussion of their soundtracks and cues used to provide a backdrop for visual elements. Students will learn the basics of using the software needed to prepare a film for the final cut. Separate cues involve dialogue, melodrama, comedy, chase, memory montage, and tension. Letter grading.

260B. Seminar: Composition for Motion Pictures and Television. (6) Seminar, three hours; laboratory, three hours. Focus on tasks of completing one entire score for television episode or original student film. Discussion of recent television shows. Composition of one or more short cues and short cues to someone else’s song required. Term assignment involves student orchestra recording to picture, designed to approach actual conditions of completing professional Hollywood assignment, from spotting to scoring. Letter grading.

261A-261J. Problems in Performance Practices. Problems: (4 or 464B or 464C). In-depth study of selected topics in performance through analysis, historical and comparative studies, and actual performance by participants. May be concurrently scheduled with course C167. S/U or letter grading.

270A-270G. Seminars: Music Education. (6 each) Seminar, three hours. May be repeated for credit without limitation. Letter grading.

270H. History. (4) Seminar, three hours; discussion, one hour; outside study, seven hours. Limited to Ethnomusicology, Music, and Musicology majors. Examination of influence of music in emerging digital world of arts, including training in arranging and multimedia production. Letter grading.

271. Music and Electronic Technology. (4) Lecture, four hours; media laboratory, one hour. Designed for graduate music performance students. Survey of music and its place in emerging digital world of arts, including training in arranging and multimedia production. Letter grading.

270F. Instrumental Literature; 270G. General Topics. (4) Seminar, three hours; laboratory, two hours; discussion, one hour; outside study, seven hours. Limited to Ethnomusicology, Music, and Musicology majors. Examination of influence of music industry on the musical create, performed, listened to, and evaluated today. Historical approach taken, beginning with music published in 18th century and continuing through representation on TV and popular music today. Letter grading.

290. Composition Forum. (2) Seminar, two hours. Weekly sessions rotate around composers of a range of mediums, including large ensemble vocal and/or instrumental works, chamber music, electronic music, and film/television, as guest lecturers. Letter grading.

292. Seminar: Special Topics in Music. (4) Seminar, three hours. Exploration of topics in music through variety of approaches that may include projects, performances, readings, discussions, research papers, and oral presentations. Topics announced in advance. May be repeated for credit. S/U or letter grading.

303. Introduction to Orff Schulwerk. (2) Lecture, 10 hours; discussion, five hours; laboratory, 15 hours. Designed for teachers of music, church musicians, and music therapists who have had little or no previous experience with Orff Schulwerk. Introduction to Orff Schulwerk, including history, philosophy, and teaching processes of this approach to music instruction for children. Offered in summer only. S/U or letter grading.

351. Conducting. (4-4-4) Lecture, 10 hours; discussion, five hours; laboratory, 15 hours. Designed for graduate students and performers. S/U or letter grading.

331A-331B-331C. Orff Schulwerk Training Courses. (4-4-4) Lecture, 10 hours; discussion, five hours; laboratory, 15 hours. Requisite: course 330. Course 331A is requisite to 331B, which is requisite to 331C. In-depth courses in teaching of Orff Schulwerk approach to music instruction for children. Students are eligible for certification at that level through American Orff Schulwerk Association. Offered in summer only. S/U or letter grading. S331A. Level I (Beginning); S331B. Level II (Intermediate level); S331C. Level III (Advanced).

331. Conducting for High School and College Band/Wind Ensemble Teachers. (2) Lecture, 25 hours. Comprehensive view of current trends in band/ wind ensemble programs, including nonverbal communication, conducting, and rehearsal techniques. Study of new of recently published literature and discussions of administration of wind/band ensemble programs. May be repeated for credit without limitation. Offered in summer only. S/U or letter grading.

332. Marching Band in Secondary Education. (2) Lecture, two hours. Study of contemporary marching band curriculum as component of music curriculum in secondary education, including current approaches, practices, and problems associated with marching bands, as well as historical perspective. 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. New Music Forum. (2) Lecture/laboratory, two hours. Course designed for students in study abroad program in music at UCLA. Interactive course in preparation and performance of premiere work especially composed for graduate performer or performers by graduate composers. Letter grading.

450. 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 reading, score reading, transposition, figured bass, harmonization, improvisation, score reduction, and ensemble issues. Concurrently scheduled with course C150. Letter grading.

455. 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 music preparation, weekly rehearsals, regular coaching, and performance for concerts. Offered in summer only. S/U or letter grading.

455A. Vocal Repertoire Interpretation. (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 music preparation, weekly rehearsals, regular coaching, and performance for concerts. Offered in summer only. S/U or letter grading.

455B. Vocal Repertoire Interpretation. (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 music preparation, weekly rehearsals, regular coaching, and performance for concerts. Offered in summer only. S/U or letter grading.

469. Instrumental Pedagogy. (4) Lecture, three hours; outside study and preparation, nine hours. Preparation: advanced proficiency on one musical instrument. Designed for graduate music students. Study of art of teaching musical instruments, including discussions of philosophy of teaching, learning process itself, and teaching of musical interpretation. 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) Laboretory, 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, one hour. Preparation: advanced proficiency in voice 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. Intensive study and preparation of musical literature in specialized field of conducting. May be repeated for credit. S/U or letter grading.

C477. Gluck Chamber Ensembles. (2) Studio, two hours. Preparation: audition. Advanced 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 without limitation. Concurrently scheduled with course C177. S/U grading.

C480. UCLA Chorale. (2) Activity, four hours. Preparation: audition. Designed for M.M. and D.M.A. students. Select mixed ensemble of 50 to 60 voices performing choral music appropriate for concert choral 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, master classes, concerts, auditions, juries, and recitals. May be repeated for credit without limitation. Concurrently scheduled with course C90Q. Letter grading.

C485. Chamber Ensembles. (2) Activity, two 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) Eight-week two-hour seminar sessions, plus intensive training session during Fall Quarter registration week. Preparation: appointment 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 M.A. or M.M. degree requirements. May be repeated for credit. S/U or letter grading.

596C. Directed Individual Studies in Music Education. (2, 4, or 6) Tutorial, to be arranged. Only 4 units may be applied toward M.A. or M.M. degree requirements. May be repeated for credit. S/U or letter grading.

596D. Directed Individual Studies in Performance Practices. (2 to 12) Tutorial, to be arranged. Only 4 units may be applied toward M.A. or M.M. degree requirements. May be repeated for credit. S/U or letter grading.

597. Preparation for Master's Comprehensive Examination or Ph.D. Qualifying Examinations. (2 or 4) Tutorial, to be arranged. S/U grading.

598. Guidance of M.A. 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 grading.

599. Guidance of Ph.D. or D.M.A. Dissertation. (4, 8, or 12) Tutorial, to be arranged. May be repeated for credit. S/U grading.

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**Scope and Objectives**

The Department of Musicology provides students with 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 M.A. and Ph.D. 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 provides 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 and musical scores, and have a working knowledge of scholarly discourse relative to a specialized topic. Students present their work to other students and discuss and critique the work of their peers.

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**Professors**

Robert W. Fink, Ph.D.
Raymond L. Knapp, Ph.D.
Tamara J.M. Levitz, Ph.D.
Timothy D. Taylor, Ph.D.

**Professors Emeriti**

Murray C. Bradshaw, Ph.D.
Malcolm S. Cole, Ph.D.
Frank A. D’Accone, Ph.D.
Marie Louise Gölner, Ph.D.
Richard A. Hudson, Ph.D.
Robert M. Stevenson, Ph.D.

**Associate Professors**

Olivia A. Bloechl, Ph.D.
Elisabeth C. Le Guin, Ph.D.
Mitchell B. Morris, Ph.D.

**Assistant Professors**

Nina S. Eidsheim, Ph.D.
Elizabeth Randell Upton, Ph.D.

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**Musicology / 479**

**College of Letters and Science**

**UCLA**

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Robert W. Fink, Ph.D., Chair
Tamara J.M. Levitz, Ph.D., Vice Chair
Music History B.A.

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 M10A, M10B, M10C, 12W, and 6 units (three terms) of performance organizations selected from Ethnomusicology 91A through 91Z, Music 90A through 90M, Music History 28A through 28C, or CM90T. Enrollment in Music History M10A, M10B, and M10C 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 at http://www.admissions.ucla.edu/prospect/adm_tr.htm for up-to-date information regarding transfer selection for admission.

The Major
Required: Music History 125A through 125F, 187; one course from 160 through 185 or from 191A through 191G or 191P; one additional 4- to 5-unit upper division elective course in ethnomusicology, music, or music history (enrollment may be limited; check with the department or instructor); and one capstone research colloquium (course 190) and one capstone seminar (course 191T). Students may enroll in lessons from the Music Department, if instructors are available.

Each course 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 quarter 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 cumulative GPA of 3.9 or better in upper division courses in the department and an overall GPA of 3.65 or better, and (3) complete at least one quarter of Music History 198 (2 units) with a grade of A or better on the resulting thesis.

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 department in 2443 Schoenberg Music Building. For further information, contact the department at (310) 206-5187.

Required Lower Division Courses (10 units):
Two music history courses with grades of C or better.

Required Upper Division Courses (21 to 25 units):
One course from Music History 160 through 185, one additional upper division music history course, and three additional upper division ethnomusicology, music, or music history courses (minimum 12 units). Enrollment in some courses may be limited; check with the department or instructor.

No more than two courses may be applied toward both this minor and a major or minor in another department or program.

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, http://www.gdnet.ucla.edu/gasal/library/pgmqrintro.htm. 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 (M.A.), Candidate in Philosophy (C.Phil.), and Doctor of Philosophy (Ph.D.) degrees in Musicology.

Music History Lower Division Courses


2. 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.

3. 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. Letter grading.

4. Film and Music. (5) Lecture, four hours; film viewing, two hours. History of music and cinema, particularly ways music is used to produce meaning in conjunction with visual image. P/NP or letter grading.

5. 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; the development of technology, musical structures, psychoactive drugs, and club cultures to induce altered states of musical consciousness; promise (versus reality of) political and spiritual transformation; electronic dance music as new art music. P/NP or letter grading.

6. American Popular Song. (4) Lecture, four hours. 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.

M10A-M10B-M10C. Introduction to Music History: Culture, Creativity. (5-5-5) ( Formerly numbered 10A-10B-10C.) (Same as Ethnomusicology M7A-M7B-M7C and Music M10A-M10B-M10C.) Lecture, four hours; laboratory, three hours. Preparation: placement examination. Course M10A is enforced requisite to M10B, which is enforced requisite to M10C. Students must receive grade of C or better to proceed to or complete course in sequence. Introduction to study of music from three complimentary perspectives: its history, relation to culture, and creative structuring. Lectures from musicologists, ethnomusicologists, and composers. Offered with small sections in which students develop wide range of musicianship skills. Organized around broad ideas (performance, simultaneity, time, place, and form) where creative and cultural implications are explored through analysis and discussion of broad repertoire of musical works spanning historical eras and global cultures. Compositional exercises, production of short compositions, and short papers dealing with historical and cultural issues are required. Letter grading.

12W. Writing about Music. (5) Lecture, four hours; laboratory, one hour. Enrolled to request: 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.


60. American Musical. (5) Lecture, four hours; discussion, 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 variety of popular musical styles, including Tin Pan Alley, jazz, and rock. P/NP or letter grading.
Upper Division Courses

125A-125F. Music, History, and Culture. (5 each) (Formerly numbered 246B-262C and 125A-125F.) Lecture, four hours; discussion, one hour. Course 125A is requisite to 125B, which is requisite to 125C; course 125D is requisite to 125E, which is requisite to 125F. Course 125A may be repeated for credit. May be repeated for credit with topic and instructor change. Letter grading.


164. Selected Topics in African American Popular Music 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. P/NP or letter grading.

160. Selected Topics in American Musical. (5) Seminar, two hours. Enforced corequisite: attendance, but not enrollment, in course 66 lecture. Exploration of ways in which specific approaches and attitudes to past shape music history, composition, and performance, with special focus on folk music and early music revivals. Letter grading.

168. 1968. (5) Seminar, two hours. Enforced corequisite: attendance, but not enrollment, in course 66 lecture. Exploration of central themes and events of 1968 as they crystallize or are brought out by events of 1968 to understand 1968 not as one iconic year, but rather to use it as lens for observing cultures of music and music-making in 1960s. Letter grading.


173. Malaysian, Gay, Bisexual, Transgender, and Queer Perspectives in Pop Music. (5) Same as Lesbian, Gay, Bisexual, and Transgender Studies M135B. 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 musics; methods in feminist and gay/lesbian theory and criticism. Letter grading.

140. Music, Media, and Consumer Society. (4) Lecture, four hours. Consideration of impact of recording technologies (gramophone, tape recorder, Walkman, sampler, broadcast media, radio, television, MTV, Internet), and global capitalism (record labels, advertising, Muzak) on way we consume and are consumed by music. How music functions and malfunctions on representation of everyday life. Letter grading.


152. Selected Topics in Music of Mozart. (5) Seminar, two hours. Preparation: ability to read music and engage in melodic, harmonic, and formal analysis. Enforced corequisite: attendance, but not enrollment, in course 62 lecture. Limited to Music History majors and minors. Intensive discussion of selected pieces by Mozart and of certain topics important to fuller understanding of his contributions to musical culture of Enlightenment, as well as contemporary culture. Letter grading.


136. Music and Gender. (5) Same as Women's Studies 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 musics; methods in feminist and gay/lesbian theory and criticism. Letter grading.


135C. History of Opera. (5) Lecture, four hours; discussion, one hour. In-depth look at specific works of Ludwig van Beethoven's music in greater depth. Letter grading.

135A. Baroque and Classical Periods; 135B. Romantic Period; 135C. 20th Century.


156. Musicology / 481 CM186. Music Industry. (4) (Same as Ethnomusicology CM182 and Music CM182.) 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, and used today. Historical approach taken, beginning with early music publishing and continuing through development of audio recordings to MTV and popular music today. Concurrently scheduled with course CM181.

187. Precapstone Course for Music History Majors. (2) Seminar, two hours. Limited to Music History majors. Student preparation for completing capstone course during Fall Quarter of senior year. Topics in methodology, methods of research in music in culture, critical evaluation and use of scholarly resources, development of bibliographies, formulation of theses, and writing about music. Taken in Spring Quarter of junior year. P/NP grading.

188. Special Courses in Music History. (4) Lecture, four hours. Special topics in music history for undergraduate students taught on temporary basis. Consult Schedule of Classes for topics and instructors. May be repeated for credit. P/NP or letter grading.

190. Research Colloquia in Music History. (1) Seminar, one hour. Designed for senior Music History majors. Designed to bring together students undertaking supervised tutorial research. Students may work with one or more faculty members to 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 and defend it at oral examination by others at similar stage of development. P/NP grading.

191A-191G. Junior Variable Topics Research Seminars: History of Music. (4 each) Seminar, three hours. Designed for junior Music History majors. Special aspects of music of each period studied in depth. Reading, discussion, and development of culminating project. May be repeated for credit. Letter grading.

191A. Middle Ages; 191B. Renaissance; 191C. Baroque; 191D. Classic; 191E. Romantic; 191F. 20th Century 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. P/NP or letter grading.
Musicology

Graduate Courses

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, 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.

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 sociological, materialist, cultural, postcolonial, poststructural, gender, race, and sexuality studies, and Eastern and Western music students. S/U 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 historical and philosophical approaches to phenomena of music and to acquire skills in analyzing and interpreting a variety of repertoires. Letter grading.

221. Seminar: Analytical/Repertoire Topics. (4) Seminar, three hours. Required or corequisite: course 200A. Specific topics vary from year to year. May not be applied toward M.A. or Ph.D. degree requirements. May be repeated for credit. S/U grading.

245. Seminar: Historical Topics. (4) Seminar, three hours. Required 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. Seminar: Analytical/Repertoire Topics. (4) Seminar, three hours. Required or corequisite: course 200A. Specific topics vary from year to year. May not be applied toward M.A. or Ph.D. degree requirements. May be repeated for credit. Meets with course 245; concurrent enrollment in both courses not allowed. S/U 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. Letter grading.

251. Seminar: Theoretical Topics. (4) Seminar, three hours. Required or corequisite: course 200A. Specific topics vary from year to year. May not be applied toward M.A. or Ph.D. degree requirements. May be repeated for credit. Meets with course 250; concurrent enrollment in both courses not allowed. S/U grading.

256. Seminar: Historical Topics. (4) Formerly numbered 260. 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. Letter grading.

261. Topics in Performance Practice. (4) Formerly numbered 261F. Seminar, three hours. Designed for graduate students. Investigation of primary source readings in performance practices across history of Western music; analytical reports and practical applications in class demonstrations. May be repeated for credit. Letter grading.


265. Seminar: Topics in Musicology. (6) Seminar, three hours. Designed for graduate students. Specific topics vary from term to term. May be repeated for credit. Letter grading.

M288. Music Industry. (4) Same as Ethnomusicology CM288 and Music CM282. Lecture, four hours; discussion, one hour; outside study, seven hours. Limited to Ethnomusicology, Music, and Musicology 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 CM186. Letter grading.

296. Research Topics in Musicology. (2 to 4) Seminar, two to four hours. Preparation: consultation with instructor. Designed for graduate musicology students. Advanced study and analysis of current topics in musicology. Discussion of current research and literature in relevant specialty of musicology. May be repeated for credit. S/U grading.


375. Teaching Apprentice Practicum. (1 to 4) Seminar, one hour. Preparation: application and approval of credit. Teaching apprentice in Music or Musicology Department. Limited to graduate students. May be repeated for credit. S/U grading.

C490T. Early Music Ensemble. (4) 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 Music History CM186 and S/U grading.

495. Introductory Practicum for Teaching Apprentices in Musicology. (2) Eight weekly two-hour seminar sessions, plus intensive training session during Fall Quarter registration week. Preparation: appointment as teaching apprentice in Music or Musicology 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.

596. Directed Individual Studies in Musicology. (2, 4, or 6) Tutorial, to be arranged. Limited to graduate students. S/U or letter grading.

597. Preparation for M.A. Comprehensive Examination or Ph.D. Qualifying Examinations. (2 or 4) Tutorial, to be arranged. Preparation: completion of all M.A. or Ph.D. course and language requirements. Limited to graduate students. S/U grading.

Near Eastern Languages and Cultures

College of Letters and Science

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http://www.nelc.ucla.edu

William M Schniedewind, Ph.D., Chair

Professors
Elizabeth F. Carter, Ph.D. (Musa Sabi Professor of
Iranian Studies)
Michael D. Cooperson, Ph.D.
S. Peter Cowe, Ph.D. (Narekatsi Professor of
Armenian Studies)
Robert K. Englund, Ph.D.
Lev Hakak, Ph.D.
Isma'il K. Poonawala, Ph.D.
Yona Sabar, Ph.D.
William M. Schniedewind, Ph.D. (Kershaw Professor of
Ancient Eastern Mediterranean Studies)
Susan E. Slyomovics, Ph.D.
Wilkele Z. Wendrich, Ph.D.
Hossein Ziai, Ph.D.
Willeke Z. Wendrich, Ph.D.
Susan E. Slyomovics, Ph.D.

Associate Professors
Carol A. Bakhos, Ph.D.
Ran'an S. Boustan, Ph.D.
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Assistant Professors
Aaron A. Burke, Ph.D.
Kara M. Cooney, Ph.D.
Nouri Gana, Ph.D.
M. Rahim Shayeeg, Ph.D.

Lecturers
Nancy Ezer, Ph.D.
Latifeh E. Hagigi, M.A.
Anaheid Keshishian, Ph.D.
Hagop Kouyoujian, M.B.A.
Guizel Kuruglo, Ph.D.
Abeer Mohamed, Ph.D.
Jeremy D. Smoak, Ph.D.

Adjunct Assistant Professors
Hans Barnard, M.D., Ph.D.
David G. Hirsch, M.A.

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 Turkic. 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 Eastern Civilizations, Arabic, Hebrew, Iranian Studies, and Jewish Studies. M.A. and Ph.D. programs are offered in Ancient Near Eastern Civilizations, Arabic, Armenian, Hebrew, Iranian, Semitics, and Turkic.

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 Eastern Civilizations, (2) Arabic, (3) Hebrew, (4) Iranian Studies, and (5) Jewish Studies. In each of these fields students must meet the requisites and take the courses prescribed. Their adviser 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 Eastern Civilizations B.A.
There are four options for a major in Ancient Near Eastern Civilizations: (1) Mesopotamia, (2) Egypt, (3) Near Eastern archaeology and cultures, and (4) biblical studies.

Preparation for the Major
Requisite for all options: Near Eastern Languages M20 or 50A; requisites for options 1, 2, and 3: German 1, 2, 3 (French 1, 2, 3 may be substituted); requisites for option 4: Hebrew 1A, 1B, 1C. Majors in all four fields are encouraged to continue their language study beyond the requisite levels.

Transfer Students
Transfer applicants to the Ancient Near Eastern Civilizations major with 90 or more units must complete the following introductory courses prior to admission to UCLA: one civilization course for all options, one year of German or French for the options in Mesopotamia, Egypt, and Near Eastern archaeology and cultures, and one year of Hebrew for the biblical studies option.

Refer to the UCLA Transfer Admission Guide at http://www.admissions.ucla.edu/prospect/adm_tr.htm for up-to-date information regarding transfer selection for admission.

The Major
Majors in all four options are required to take 14 upper division courses selected in consultation with the program adviser.

Majors selecting option 1 (Mesopotamia) are required to take 14 courses as follows: four language courses (Semitics 140A, 140B, 141, 142) and two literature and history courses selected from Ancient Near East M104A, 150A, M185D. The remaining eight courses are to be selected from (in Ancient Near East M103A, M103B, M104B, M104C, M104D, 130, 140A, 140B, 140C, 145, 150B, 150C, 160, 161, 162, 163, 170, Iranian 169, Jewish Studies M150A. One course must be in research methodology (such as Anthropology 111, C115R, 130, M140, 141, 150, 156, Archaeology C159, Comparative Literature 100, English 111A, 140A, or Linguistics 110) taken preferably in another department with consent of the adviser.

Majors selecting option 2 (Egypt) are required to take 14 courses as follows: four language courses (Ancient Near East M120A, 120B, 121A, 121B) and three literature and history courses (Ancient Near East M103A, M103B, 150B). The remaining seven courses are to be selected from Ancient Near East CM101A, CM101B, M104A, M104B, M104C, M104D, 121B, 121C, 123A, 123B, 124, 130, 150A, 150B, 150C, 160, 161, 162, 163, C165, 170, Iranian 169, Jewish Studies M150A, M182A. One course must be in research methodology (such as Anthropology 111, C115R, 130, M140, 141, 150, 156, Archaeology C159, Comparative Literature 100, English 112A, 120A, or Linguistics 110) taken preferably in another department with consent of the adviser.

Majors selecting option 3 (Near Eastern archaeology and cultures) are required to take 14 courses as follows: three upper division courses in any Near Eastern language (Akkadian, Arabic, Egyptian, Hebrew) and two courses in research methodology (such as Anthropology 111, C115R, 130, M140, 141, 150, 156, Archaeology C159, Comparative Literature 100, English 112A, 120A, or Linguistics 110) taken preferably in another department with consent of the adviser.


Majors selecting option 4 (biblical studies) are required to take 14 courses as follows: four language courses (English 111B, Jewish Studies M150A, M182A). The remaining seven courses are to be selected from Ancient Near East M103A, M103B, M104A, M104B, M104C, M104D, 130, 150A, 150B, 160, 161, 162, 163, C165, 170, English 111A, 111C, Greek 130, Hebrew 125, 130, 135, History 186A, 186B, 186C, Jewish Studies 150B, 170, 177, Latin 120, Semitics 130.

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 archeological excavation in the broader Middle East. For information on studying abroad, con-
tact the Education Abroad Program, B300 Murphy Hall, (310) 825-4995; for UCLA-affiliated excavations, contact the departmental academic counselor at (310) 825-4165.

### Arabic B.A.

#### Preparation for the Major

**Required:** Arabic 1A, 1B, 1C.

**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 at http://www.admissions.ucla.edu/prospect/adm_tr.htm for up-to-date information regarding transfer selection for admission.

#### The Major

**Required:** Fourteen courses, including seven from Arabic 102A, 102B, 102C, 103A, 103B, 103C, 120, 130, 132, C141, 142, 181; three literature and culture courses from Arabic M110, 150, M151, Comparative Literature 100; Islamic 110, 130, 151; and two history courses from History 105A, 105B, 105C, 106A, 106B, 111A, 111B, 111C, 200J. The remaining two courses may be selected from Anthropology M171P, 271, Arabic 111A, 111B, 111C, 112A, 112B, 112C, Art History 104A, 104B, C104C, 213, C214, Geography 187, History 105A, 105B, 105C, 106A, 106B, 111A, 111B, 111C, 200J, Near Eastern Languages 200, 201, Political Science 132A, M132B, 157, 165, 245, Women’s Studies 285. No more than two of the 14 courses may be credited through a proficiency test administered by the department. Other courses, including extra-departmental courses, may be applied with consent of the adviser.

#### Hebrew B.A.

**Preparation for the Major**

**Required:** Hebrew 1A, 1B, 1C, or equivalent.

**Transfer Students**

Transfer applicants to the Hebrew major with 90 or more units must complete the following introductory courses prior to admission to UCLA: one year of Hebrew.

Refer to the UCLA Transfer Admission Guide at http://www.admissions.ucla.edu/prospect/adm_tr.htm for up-to-date information regarding transfer selection for admission.

#### The Major

**Required:** Fourteen courses, including at least two from Hebrew 103A, 103B, 103C, M110A, M110B, M110C, 120, 140, 141, 142, 161A, 161B, 161C, 170, 178, and at least five courses from Ancient Near East 150A, 150B, 163, Ancient Hebrew 1A, 1B, 1C, Art History 104A, 104B, C104C, Ethnomusicology 20B, History 105A, 105B, 105C, 110D, Iranian 104, 120, 181A, 181B, 187, 197, 199, M210, 220A, 220B, 221, 231A, 231B, 231C, 250, 251, Political Science 157. The remaining three courses may be selected from any of the above. No more than two of the 14 courses may be credited through a proficiency test administered by the department. A maximum of two Iranian 197 or 199 courses (8 units total) may be applied toward the major.

#### Iranian Studies B.A.

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 at http://www.admissions.ucla.edu/prospect/adm_tr.htm for up-to-date information regarding transfer selection for admission.

#### The Major

**Required:** Fourteen courses, including at least two from Iranian 102A, 102B, 102C, 103A, 103B, 103C, M110A, M110B, M110C, 120, 140, 141, 142, 161A, 161B, 161C, 170, 178, and at least five courses from Ancient Near East 150A, 150B, 163, Ancient Iranian 1A, 1B, 1C, Art History 104A, 104B, C104C, Ethnomusicology 20B, History 105A, 105B, 105C, 110D, Iranian 104, 120, 181A, 181B, 187, 197, 199, M210, 220A, 220B, 221, 231A, 231B, 231C, 250, 251, Political Science 157. The remaining three courses may be selected from any of the above. No more than two of the 14 courses may be credited through a proficiency test administered by the department. A maximum of two Iranian 197 or 199 courses (8 units total) may be applied toward the major.

#### Jewish Studies B.A.

Students must select one of five tracks: (1) Jewish history, (2) Jewish religions, (3) Jewish literature and culture, (4) American Jewish literature and culture, or (5) Israeli studies.

**Preparation for the Major**

**Required:** Jewish Studies 10.

**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 institution of Judaism course.

Refer to the UCLA Transfer Admission Guide at http://www.admissions.ucla.edu/prospect/adm_tr.htm for up-to-date information regarding transfer selection for admission.

#### The Major

Students are required to complete Sociology 159 and four of the following courses, in addition to the core courses for the major: English 103, 111A, 111C, 183C, 183D, 197, Jewish Studies 135, 143, 150A, 150B, 151A, 151B, 155, 170, 177, 187, 197, 199. For the American Jewish studies track, students are required to complete Sociology 159 and four of the following courses, in addition to the core courses for the major: English 103, 183C, 197, Jewish Studies 135, 143, 150A, 150B, 151A, 151B, 155, 170, 177, 187, 197, 199.

For the American Jewish studies track, students are required to complete Sociology 159 and four of the following courses, in addition to the core courses for the major: English 103, 183C, 197, Jewish Studies 135, 143, 150A, 150B, 151A, 151B, 155, 170, 177, 187, 197, 199.

#### 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, B300 Murphy Hall, (310) 825-4889.
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 and Islam.

To enter the minor, students must have an overall grade-point average of 2.0 or better, have completed Arabic 1A, 1B, 1C, or the equivalent as determined by the department and file a petition in 378 Humanities Building, (310) 825-4165.

Required Upper Division Courses (28 units):

- Seven courses in Arabic or Islamics; 199 courses may not be applied. With consent of the undergraduate adviser, two of the seven courses may be taken outside the department. Courses recommended as electives for the major in Arabic (Anthropology M171P, 271, Art History 104A, 104B, C104, 213, C214, Comparative Literature 107), Geography 187, History 105A, 105B, 105C, 106A, 106B, 108B, 111A, 111B, 111C, 200J, Islamics 110, 130, Near Eastern Languages 200, 201, Political Science 132A, M132B, 157, 165, 245, Women's Studies 285 may be applied. Other courses, including extra-departmental courses, may be applied with consent of the adviser.

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.

Armenian Studies Minor

The Armenian Studies minor is designed for students who wish to augment their major program with a group of courses that provide a systematic introduction to the study of Armenian culture.

To enter the minor, students must have an overall grade-point average of 2.0 or better, have completed Armenian 101A, 101B, 101C, or the equivalent as determined by the department, and file a petition in 378 Humanities Building, (310) 825-4165.

Required Upper Division Courses (28 units):

- Seven courses from the Armenian section of the department; 199 courses may not be applied. At least one course from each of the three disciplines of language, literature, and history must be selected. Eligible language courses begin in the fourth quarter of study (i.e., course 102A for Western Armenian, course 105A for Eastern Armenian). With consent of the undergraduate adviser, two of the seven courses may be taken outside the department. Ordinarily, the following courses may be applied: History 107A through 107E, 200S, 201S, 211A, 211B, 212, Indo-European Studies M150.

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, have completed Hebrew 1A, 1B, 1C, or the equivalent as determined by the department, and file a petition in 378 Humanities Building, (310) 825-4165.

Required Upper Division Courses (28 units):

- Seven 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 seven courses may be taken outside the department.

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.

Near Eastern Languages and Cultures Minor

The Near Eastern Languages and Cultures 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, Armenian, 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 Upper Division Courses (28 units):

- Seven courses selected in consultation with an academic adviser from any of the courses offered by the department; 199 courses may not be applied. With consent of the undergraduate adviser, two of the seven courses may be taken outside the department, provided the content of the courses bears a direct relation to the culture of the Near East.

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, http://www.gdnet.ucla.edu/gasaa/library/pgmqrintro.htm. 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 (M.A.), Candidate in Philosophy (C.Phil.), and Doctor of Philosophy (Ph.D.) degrees in Near Eastern Languages and Cultures.

Ancient Near East

(Akkadian, Aramaic, Phoenician, and Ugaritic are listed under Semitics.)

Lower Division Course

10W. Jerusalem: Holy City. (5) Lecture; three hours; discussion, one hour. Enforced requisite: English Composition 3 or 3H or English as a Second Language 36. 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.

Upper Division Courses

CM101A. Art and Architecture of Ancient Egypt, Predynastic Period to New Kingdom. (Formerly numbered M101A.) (Same as Art History M101A.) Lecture, three hours. Study of architecture, sculpture, painting, and minor arts during 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) (Formerly numbered Near Eastern Languages M101B.) (Same as Art History M101B.) 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 M101C.) 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 processions, chronological changes in function and form of Theban temples through time, and statuary program of individual temples. P/NP or letter grading.

M103A-M103B. Ancient Egyptian Civilization. (4-4) (Same as History M103A-M103B.) Lecture, three hours; discussion, one hour (when scheduled). Course M103A is not requisite to M103B. Designated for juniors/seniors. Political and cultural institutions of ancient Egypt and ideas on which they were based. P/NP or letter grading. M103A. Chronological discussion of Prehistory, Old and Middle Kingdom. M103B. New Kingdom and Late period until 332 B.C.

M104A. History of Ancient Mesopotamia and Syria. (4) (Formerly numbered M104.) (Same as History M104A.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Political and cultural development of Fertile Crescent, including Palestine, from Late Uruk to neo-Babylonian period. P/NP or letter grading.

M104B. Sumerians. (4) (Formerly numbered M104B.) (Same as History M104B.) Lecture, three hours. Overview of Sumer and related cultures of Greater Mesopotamia in 4th and 3rd millennia B.C.E., with focus on rich cultural history of region and integration of archaeological, art historical, and written records. P/NP or letter grading.

M104C. Babylonians. (4) (Formerly numbered M104B.) (Same as History M104C.) Lecture, three hours. Overview of Babylon and cultural history of region from late 3rd millennium B.C.E. to invasion of Cyrus in 539 B.C.E., with focus on history and archaeology of reformation, urban structure, literature, and legal practices. P/NP or letter grading.
These topics? How does one reason, argue, and solve real-world problems through digital cultural mappings? Designing digital implementation, project management, and student mapping-based research projects. Part of Digital Cultural Mapping Project supported by W.M. Keck Foundation. P/NP or letter grading.

120A-120B-120C. Elementary Ancient Egyptian. (5-5-5) Lecture, five hours. Course 120A is requisite to 120B, which is requisite to 120C. P/NP or letter grading.

120A. Introduction to hieroglyphic script and phonology and morphology of Middle Egyptian. Basic rules of Middle Egyptian syntax, with focus on nominal, adjectival, and adverbial sentences. 120B. Verbal system and syntax of verbal sentences of Middle Egyptian. 120C. Reading of authentic Egyptian texts to deepen knowledge of Egyptian grammar and to acquire familiarity with aims and methods of philology, study of ancient culture.

121A-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. P/NP or letter grading.

124. Middle Egyptian Technical Literature. (4) Lecture, three hours. Requisite: course 121C. Reading of Middle Egyptian technical literature in logographic transcription. Medical, veterinary, mathematical, and astronomical texts included. P/NP or letter grading.

125A. Cultural Digital Mapping Core Course A: Place, Time, and Digital World. (4) Lecture, three hours. Introduction to how emerging digital mapping technologies like geographic information systems (GIS), virtual globes, and three-dimensional modeling are being utilized as new means of inquiry in the social sciences. Provides students with critical apparatus needed to effectively, responsibly, and heuristically use technology in digital cultural mapping projects. Analysis of different forms of works as well as students’ own research presentation through mapping, reasoning, and argumentation to learn to critically assess map-basedpresentations. Tracing of history of mappings and spatial representation of place to learn how mapping has always been connected with societal structures, politics, economics, and culture because maps do not merely represent reality, but also produce reality by structuring world and organizing knowledge about it. Part of Digital Cultural Mapping Project supported by W.M. Keck Foundation. P/NP or letter grading.

125B. Digital Cultural Mapping Core Course B: Google Earth and Information Visualization Superheroes and Timelines. (4) Same as Architecture and Urban Design M125B. Laboratory, three hours; discussion, two hours; enforced requisite: course 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, applying skills students learned in course 125A to real-world data sets in humanities and social sciences. By mastering mapping 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 field. Students learn to use suite of GIS and georeography 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 mappings? Designing digital implementation, project management, and student mapping-based research projects. Part of Digital Cultural Mapping Project supported by W.M. Keck Foundation. P/NP or letter grading.

125C. Digital Cultural Mapping Core Course C: Summer Residential Program in 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. Gathering and input of datasets from real-world sources, creating virtual 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.

130. Ancient Egyptian Religion. (5) Lecture, three hours; discussion, one hour. Introduction to religious beliefs, practices, and customs of ancient Egypt to study Egyptian religion’s role in formation of thought and sphere of action that once served as meaningful and relevant framework for understanding physical reality and human life for inhabitants of Nile Valley. General social and economic conditions as well as religious beliefs. P/NP or letter grading.

135. Religion in Ancient Israel. (4) 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. Discussion of Canaan during 1st millennium B.C.E. P/NP or letter grading.

140A-140B-140C. Elementary Sumerian. (4-4-4) Lecture, three hours. Requisites: Semiotics 140A, 140B. Elementary grammar and reading of royal inscriptions, letters, and administrative texts from Uruk III period. P/NP or letter grading.


150A-150B-150C. Survey of Ancient Near Eastern Literatures in English. (4-4-4) Lecture, three hours. Each course may be taken for credit once. P/NP or letter grading. 150A. Mesopotamia: 150B. Egypt. Preparation: familiarity with Egyptian history. Survey of 3,000 years of ancient Egyptian literature. Reading and translation of literary works, 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. 150C. Syria and Palestine, Asia Minor, Persia.


162. Archaeology of Ancient Israel. (4) Lecture, three hours. Survey of Bronze and Iron Age archaeology of Canaan and Israel through coming of Alexander the Great, with emphasis on relationships between ancient archaeology and historical texts. P/NP or letter grading.

163. Archaeology of Iran. (4) Lecture, three hours. Designed to introduce students to Iranian archaeology from prehistoric through Achaemenid times. P/NP or letter grading.

165. Egyptian Archaeology. (4) Formerly numbered 165B. Seminar, three hours. Opportunity to re-examine aspects of topics in ancient Egyptian archaeolog-
lect subject, then write research design that could form basis for extensive paper, grant application, or oral exam.

Students work closely with faculty members and report weekly on their progress. Preparation of at least two oral progress-report presentations, one on theoretical framework and one on practical aspects of project, is required. Each student writes research design that includes theoretical and practical aspects of research and formulates bridging arguments required. S/U or letter grading.

M208. Topics in Ancient Iranian History. (Same as History M210 and Iranian M210.) Seminar, three hours. Varying topics on Elamite, Achaemenid, Arsacid, and Sasanian history. May be repeated for credit. S/ U or letter grading.

210. Late Egyptian. (4) Lecture, three hours. Requisites: courses 121A, 121B, 121C. Late Egyptian grammar and reading of both hieroglyphic and hieratic texts. May be repeated for credit. S/U or letter grading.

211A-211B. Egyptian Texts of Greco-Roman Period. (4-4) Lecture, three hours. Requisite: course 121C. Introduction to grammar and orthography of hieroglyphic texts from Greco-Roman temples. Texts reading and translation of various textual types. Letter grading.

220. Seminar: Ancient Egypt. (4) Seminar, three hours. May be repeated for credit. S/U or letter grading.

221A-221B. Demotic. (4) Lecture, three hours. Requisite: course 221C. Course 221A is requisite to 221B. Introduction to Demotic grammar and orthography. Reading of texts from various genres. May be repeated for credit with topic change. S/U or letter grading.

230. Seminar: Ancient Syria/Palestine. (4) Seminar, three hours. Examination of selected topics on political, social, and intellectual history of ancient Israel. Exploration of how historical, social, and political contexts shaped and influenced interpretation and use of biblical texts. May be repeated for credit. S/U or letter grading.

240A-240B-240C. Seminars: Sumerian Language and Literature. (4-4-4) Seminar, two hours. Readings of texts from various Sumerian periods and literary genres; selected problems in linguistic or stylistic analysis and literary history. S/U or letter grading.

250S. Seminar: Ancient Mesopotamia. (4) Same as History M207.) Seminar, three hours. Selected topics on political, social, and intellectual history of ancient Mesopotamia. May be repeated for credit. S/U or letter grading.

250X. Seminar: Ancient Mesopotamia. (1) Seminar, three hours. Selected topics on political, social, and intellectual history of ancient Mesopotamia. Course for students who participate regularly in class meetings without homework required. In course M250. May be repeated for credit. 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 analysis and interpretation of Near Eastern archaeological finds in museum collections. Students work with objects in Heeremanke Collection of Los 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 desert sites, wadi cemeteries, and border regions. Architecture and decoration of temples and tombs, statuary and monuments, settlement and use history, text translation of appropriate documents, iconography, monumental inscriptions, or pertinent socioeconomic texts. May be repeated. S/U or letter grading.

264. Egyptian Museum Collections. (4) Seminar, two hours; research group meeting, one hour. Ancient Egyptian museum collections around world, 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 ("form") which lead to site formation and of stratigraphic procedures to be used in recovery of embedded cultural materials. Study of issues covered in literature, with specific test cases from actual excavations and site analyses. Coverage of theoretical implications of such disciplines as surveying and pedology, with help of specialists. S/U or letter grading.

266. Egyptian Archaeology. (4) Seminar, three hours. Opportunity to research aspects of ancient Egyptian archaeology. Topics vary each year. May be repeated for credit. Concurrently scheduled with course C165. S/U or letter grading.

C267A. Art and Architecture of Ancient Egypt, Pre -Dynastic Period to New Kingdom. (4) Lecture, three hours. Study of architecture, sculpture, painting, and minor arts during Predynastic period and Old Kingdom. May be repeated for credit with consent of instructor. Concurrently scheduled with course CM101A. S/U or letter grading.

C267B. Art and Architecture of Ancient Egypt, New Kingdom to Greco-Roman Period. (4) Lecture, three hours. Study of architecture, sculpture, painting, and minor arts from New Kingdom to Greco-Roman period. Concurrently scheduled with course CM101B. S/U or letter grading.

C269. Introduction to Archaeological Sciences. (4) (Same as Anthropology CM210Q.) Lecture, three hours. Basic understanding of newly introduced methods and techniques throughout field of archaeology to implement them and to evaluate and analyze 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, theoretical 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 CM169. S/U or letter grading.


277. Variable Topics in Ancient Near East. (4) Lecture, four hours; laboratory, one hour. Variable topics; consult Schedule of Classes for topics to be offered in specific term. Concurrently scheduled with course C177. 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.

597. Examination Preparation. (2 to 8) Tutorial, to be arranged. S/U or letter grading.


Arabic

Lower Division Courses

1A-1B-1C. Elementary Standard Arabic. (5-5-5) Lecture, six hours. Course 1A is enforced requisite to 1B, which is enforced requisite to 1C. Introduction to spoken Arabic (modern standard Arabic), including listening, speaking, reading, and writing. P/NP or letter grading.

1B. Intermediate Standard Arabic. (5-5-5) Lecture, six hours. Requisite: course 1C. Course 1A is requisite to 1B, which is requisite to 1C. Intermediate formal Arabic, including listening, speaking, reading, and writing. P/NP or letter grading.

1C. Advanced Intermediate Arabic. (4-4-4) Lecture, four hours. Requisites: courses 102A, 102B, 102C. Advanced formal grammar, composition, and readings from classical and modern texts. Letter grading.

M110. Thousand and One Nights/Alf Layla Wa-Layla. (4) (Same as Comparative Literature M110.) Lecture, three hours. May be repeated for credit with topic change. S/U or letter grading.

Since its appearance in Europe in 1704, Thousand and One Nights is most well-known work of Arab lit- erature in West. Examination of cycle of tales more 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 classical Arabic, and Western appropriations of tales in music, film, and novels (Ravel, Rimsky-Korsakov, Barth, Poe, and Walt Disney). P/NP or letter grading.

111A-111B-111C. Elementary Spoken Egyptian Arab- ic. (4-4-4) Lecture, three hours. Enforced requisite: course 1C or 8. Course 111A is requisite to 111B, which is enforced requisite to 111C. Not suitable for heritage speakers. Introduction to spoken Arabic dialect of Egypt. Training in listening, speaking, and reading. P/NP or letter grading.


112A-112B-112C. Advanced Spoken Egyptian Arab- ic. (4-4-4) Lecture, three hours. Study of Egyptian colloquial (vernacular) or heritage spoken Arabic for students who have completed courses 1A, 1B, 1C. P/NP or letter grading.

115. Studies in Arabic Dialectology. (4) Lecture, three hours. Introduction to spoken Arabic dialect of Ar- abic, with emphasis on speaking and listening compre- hension. Dialects vary from year to year based on stu- dent interest and instructor availability and may include Lebanese, Levantine, North; and other dialects. 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 vocabu- lary, grammar, idiomatic expressions, and relevant cultural background through dialogues and other conversations. P/NP or letter grading.

120. Islamic Texts. (4) Lecture, four hours. Requisite: course 103C. Readings from Qur'an, Tafsir, Hadith, Pan. May be repeated for credit.

123. Oral Literature and Performance of Arab World. (4) (Same as Comparative Literature M123.) Lecture, three hours. Knowledge of Arabic not re- quired. Introduction to oral tradition of troubadours, storytellers, oral poets, and performers in Arabic-speaking Middle East. P/NP or 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 Kalâm Texts. (4) Lecture, three hours. Requisite: course 120. Readings from pre- modern philosophy and theology. May be repeated for credit. P/NP or letter grading.

C141. Modern Arabic Literature. (4) (Formerly numbered 141.) Lecture, three hours. Requisite: course 102C. Conducted in English and Arabic, with all re-
quired readings in original Arabic only. Readings in modern Arabic literature, variously organized across or around particular trends, genres, topics, canonical authors, scholars, or national literatures, mixing thematic and formal analyses of literary and critical texts and making use of film, video, and song in approaching literary culture for credit. Concurrently scheduled with course C241. Letter grading.


148F. Special Studies: Readings in Arabic. (1) Seminar, one hour. Requisite: course 102C. Students must be concurrently enrolled in affiliated main course. Primary readings and additional work in Arabic to enrich and augment work assigned in main course, including reading, writing, and other exercises. May be repeated for credit. 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 political, religious, and social contexts. Coverage of pre-Islamic Arabia, rise of Islam, and major themes of Southwest Asian history, along with significant moments in literature and culture of premodern period. Consideration of selected modern responses to Arabic tradition. P/NP or letter grading.

151. Modern Arabic Literature in English. (4) (Formerly numbered 151.) (Same as Comparative Literature M151.) Lecture, three hours. Designed for upper division literature majors. Topics may include conceptions of modernity in modern Arab culture; East-West debate; memory, trauma, and mourning; violence, narrative, and ethics; globalization, oil, and cultural insularity; Arab culture in transnational context or cultural hybridity; Arab cinema, translation, marketing. Genres may include prison narratives; novels of terror; memoirs by women and/or by refugees and exiles; 19th- and 20th-century travel narratives; Arabic romanticized pre-1948; rise of novelistic novel. Areas may range from generic look at Arab world to narrow focus on Maghreb or one 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.

1515. Al-Andalus: Literature of Islamic Spain. (4) (Formerly numbered 1515.) (Same as Comparative Literature M1515.) 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 formative force in European life and letters. P/NP or letter grading.

1517. Culture Area of Maghreb (North Africa). (4) (Same as Anthropology M1517 and History M150C.) Lecture, three hours. Designed for juniors/seniors. Introduction to North Africa, especially Morocco, Algeria, Tunisia, and Libya, also known as Maghreb or Tamazight. Topics include changing notions of personal- ity in Maghreb, various religious identities; colonialism; and gender and legal rights, changing representations of Islam, and religions in region's public spaces. P/NP or letter grading.

180. Linguistic Analysis of Arabic. (4) Lecture, four hours. Requisite: knowledge of Arabic in both its modern standard and dialect forms. Introduction to linguistic analysis of Arabic phono- mology, morphology, and syntax and to linguists’ approaches to specific problems posed by Arabic grammar and dialects.

181. Translating Arabic. (4) Seminar, three hours. Preparation: advanced proficiency in English and Arabic (at least three years of Arabic instruction or equiva- lent). Open to both native and nonnative speakers of English and Arabic; requires knowledge of modern standard and dialect of translation from Arabic into English, with focus on producing accurate and readable English versions of Arabic texts from variety of fields. Close reading and written translation of Arabic texts, with review of lin- guistic and cultural difficulties that arise in course of translation. Texts may include classical Arabic literature (religion, historiography), modern writing (litera- ture, media, translation, radio), based on student interest. Letter grading.

188FL. Special Studies: Readings in Arabic. (1) Seminar, one hour. Requisite: course 102C. Students must be concurrently enrolled in affiliated main course. Primary readings and additional work in Arabic to enrich and augment work assigned in main course, including reading, writing, and other exercises. May be repeated for credit. P/NP or letter grading.

197. Individual Studies in Arabic. (2 to 4) Tutorial, one hour. Limited to juniors/seniors. Individual intensive study, with scheduled meetings to be arranged between faculty member and student. Reading and tangible evidence of mastery of subject matter may be required. May be repeated for credit. Individual contract required. P/NP or letter grading.

199. Directed Research or Senior Project in Arabic. (2 to 4) Tutorial, one hour. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Culminating paper or proj- ect 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 and hermeneutics of various schools of thought in Islam, such as Ahl al-sunna wa’l-jama’a, Shi’a, Mu’tazila, and Sufis. May be organized around one au- thor and his works, multiple authors and their works, or specific topic with representative readings from various schools. Exploration of secondary literature in Arabic and other languages for student research papers. May be repeated for credit. S/U or letter grading.

230FL. Texts in Islamic Law, (Same as Hebrew M230FL.) Lecture, three hours. Requisites: course 102C, Hebrew 102C. Reading of Judeo-Arabic texts by Mai- 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.

240A. Seminar: Arab Historians. (4) (Formerly num- bered 240.) Seminar, three hours. Introduction to very large body of literature on medieval Islamic history. Se- lected readings in Arabic that represent cross-section of Islamic historical writings, including Ibn Ishaq’s Siraj, al-Qadi al-Mansur’s Al-Tabaqat al-umumiyya, Ibn Khaldun’s Muqaddima, and Maqrizi’s topography. Historians studied ei- ther to determine their reliability as sources of our view of history and its theoretical foundations. Explo- ration of sources, research tools, and problems in Islamic history. 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 geographers. Selected readings in Arabic that represent cross-section of Islamic geographical writings distributed over number of disci- plines and national literatures, such as Sur- ra-al-ad, Kidb al-Buldan, al-Masalik wa-l-mamalik, to- pography, and travel accounts. May be repeated for credit. S/U or letter grading.

241. Modern Arabic Literature. (4) Lecture, three hours. Requisite: course 102C. Conducted in English and Arabic, with all required readings in original Arabic only. Readings in modern Arabic literature, variously organized across or around particular trends, genres, topics, canonical authors, regional, or national literatures, mixing thematic and formal analyses of literary and critical texts and making use of film, video, and song in approaching literary culture. May be repeated for credit. Concurrently scheduled with course C141. Letter grading.

250. Seminar: Premodern Arabic Literature. (4) Seminar, three hours. Readings in Arabic texts from vari- ety of periods and genres, along with appropriate sec- ondary literature. Topics include pre-Islamic poetry and oratory, Qur’an, Umayyad and Abbasid poetry and lit- erary prose, Hadith and Fiqh, historiography, biogra- phy, geography, medicine, mathematics, theology, as- ceticism, and mysticism. May be repeated for maxi- mum of 24 units. S/U or letter grading.

251. Seminar: Modern Arabic Literature. (4) Seminar, three hours; discussion, one hour. Requisite: course C141. Selected topics in modern and contem- porary Arabic prose and poetry. May be repeated for credit. Letter grading.

2525. Literatures and Cultures of Maghreb. (4) (Same as Comparative Literature M2525.) Seminar, three hours. Limited to graduate students. Examination of predominantly diverse literatures of Maghreb in their multiple and competing contexts of language and gen- der politics, religious and cultural formations, Pan-Arab- istic, national, and other traditions of post-colonial and economic development, modernity and globalization, immigration and citizenship, soccer industry and Rai music, mass media and Star Academy Maghreb, and media representations of Maghreb today. May be repeated for credit. S/U or letter grading.

275. Encountering Arabic Manuscripts: Introduction to Arabic Paleography and Critical Edition of Manuscripts. (4) Lecture, three hours; discussion, one hour. Requisite: course 103C. Introduction to Ara- bic paleography and how to prepare editions of medi- eval manuscripts with critical apparatus and stemma. During past decades enormous number of previously unknown Arabic manuscripts have been discovered. While vast range of medieval texts have been pub- lished in editions of varying quality, equally large num- ber of manuscripts remain unpublished. UCLA has outstanding collections of Near Eastern manuscripts in Arabic, Persian, and Ottoman Turkish, primarily in fields of theology, medicine, and philosophy. May be repeated for credit. S/U or letter grading.

359. 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 Armenian. (5-5-5) Lecture, five hours. Course 101A is recommended requisite to 101B, which is recommend- ed requisite to 101C. Students with knowledge of Ar- menian, optional knowledge of Eastern or Western Armenian (from elementary or high school) should contact instructor to determine ap-
propriate 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 Armenian. (4-4-4) Lecture, four hours. Recommended requisite: course 102C. Course 103A is recommended 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. Designed for students with advanced speaking fluency and reading abilities in Armenian. Exploration of advanced Western Armenian 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 Armenian. (5-5-5) 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. (5-5-5) Lecture, five hours. Recommended requisite: course 104C. Students with knowledge of Eastern or Western Armenian (from elementary or high school) should contact instructor to determine appropriate enrollment level. Continuing introduction to Armenian grammar, with greater attention to readings from short stories and simple newspaper articles and film viewings on video. Emphasis on improving students’ self-expression in idiom, both orally and in written form. Each course may be taken independently for credit. P/NP or letter grading.

106A-106B-106C. Advanced Modern Eastern Armenian. (4-4-4) Lecture, four hours. Recommended requisite: course 105C. Students with knowledge of Eastern or Western Armenian (from elementary or high school) should contact instructor to determine appropriate enrollment level. Designed for students with advanced speaking fluency and reading abilities in Armenian. Discussion of contemporary Armenian social and cultural issues through readings from critical essays, editorials, short stories, and poems written since World War II and film showings. Emphasis on enhancing students’ self-expression orally and in written form. Each course may be taken independently for credit. P/NP or letter grading.

110. History of Armenian Language. (4) Lecture, three hours. Requisite: course 101C or 104C. Exploration of history of Armenian language as reflected in literature and intellectual discourse throughout written period (5th through 20th centuries). Use of top-down approach beginning with modern state of Armenian language in its two standard versions (Western and Eastern), then retracing of historical development through formation of New Armenian (17th century), Middle Armenian (17th through 12th centuries), and earliest attested form, Grabar, literary version of ancient Arme- nian (11th through 5th centuries). Discussion of attempts at reconstructing major features of Armenian phonology and morphology in preliterary period. P/NP or letter grading.

130. Armenian Civilization 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, architecture, etc. and social function these works performed in this important period of Armenian history. Letter grading.

131. Armenian Civilization in Cilician Period, 1080 to 1375. (4 to 8) Lecture, four to eight 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 influenced by those of Western Europe and East (Crusader states, Seljuqs, Mamluks, Mongols). Letter grading.

150A-150B. Survey of Armenian Literature in English. (4-4) Lecture, three hours. Knowledge of Armenian not required. Each course may be taken independently for credit. P/NP or letter grading.

151. Armenian Literature and Canon Formation. (4) Lecture, four hours. Discussion of fundamental themes and genres around which Armenian literary tradition is structured, with emphasis on how this has been transformed in course of last two centuries as result of exposure to European thought and expressive forms. Concurrently scheduled with course 251C. 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 252. Letter grading.

153. 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 253. P/NP or letter grading.


161. Modern Film and Culture. (5) Lecture, six hours. Requisite: course 101C or 104C. 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 252. Letter grading.

170. Armenian Poetry, 1880 to 1930. (4) Lecture, three hours. Requisite: course 101C or 104C. Examination of process behind creation of range and variety of poetic movements and literary poetry in early modern period. Emphasis on improving students’ self-expression in idiom, both orally and in written form. Each course may be taken independently for credit. P/NP or letter grading.

171. Variable Topics 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.

172. Armenian Painting, 17th to 20th Century. (Same as Art History M172.) Lecture, three hours. Overview of development of Armenian painting out of its matrix in 17th and 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. May be repeated for credit. P/NP or letter grading.

197. Individual Studies in Armenian. (2 to 4) Tutorial, one hour. Limited to juniors/seniors. Individual intensive study, with schedule and topics 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 consent 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. Culumning 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 (9th to mid-19th century) and guided readings in narrative prose texts. Letter grading.


232A-232B-232C. Advanced Classical Armenian. (4-4-4) Lecture, four hours. Requisite: course 231A or 231B or 231C. In-depth reading and linguistic analysis of texts related to Philhellenic School of 8th 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.

C251. Armenian Literature and Canon Formation. (4) Lecture, four hours. Discussion of fundamental themes and genres around which Armenian literature tradition is evolved and maintained. May be repeated for credit with topic change. S/U or letter grading.

C252. 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 C151. S/U or letter grading.

C253. 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 C153. P/NP or letter grading.


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C265. Armenian Film and Culture. (5) Lecture, six hours. Requisite: course 101C or 104C. 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 C166. 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.


Berber
Upper Division Courses
101A-101B-101C. Elementary Berber. (4-4-4) Lecture, three hours; laboratory, two hours. Development of oral proficiency and analysis of basic grammatical structure. P/NP or letter grading.
130. Berbers. (4) Lecture, four hours. Examination of main features of Berber societies and cultures, with particular attention to social structures and institutions on one hand, and to customs, values, and beliefs on the other. Presentation of broad framework within which study of particular aspects of Berber cultures may be pursued. P/NP or letter grading.

Hebrew
Lower Division Courses
1A-1B-1C. Elementary Hebrew. (5-5-5) Lecture, five hours; laboratory, one hour. Course 1A is enforced requisite to 1B, which is enforced requisite to 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. Requisite: course 1C. Course 102A is requisite to 1B, which is requisite to 102C. Amplification of grammar; reading of texts from modern literature. P/NP or letter grading.
103A-103B-103C. Advanced Hebrew. (4-4-4) Lecture, three hours. Requisites: courses 102A, 102B, 102C. Students with prior knowledge of Hebrew who did not take courses 102A, 102B, and 102C should contact instructor to determine appropriate enrollment level. Designed for students with intermediate speaking 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 Hebrew 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 speech acts in both formal 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. P/NP or letter grading.
113. Contemporary Israeli Short Stories/Novellas and Films in English. (5) Lecture, three hours; laboratory, two hours. Exploration of Israeli short stories/ novellas and films (translated into English) written since mid-1980s that use, to varying degree, postmodernist techniques to undermine predominance of modernist-Zionist narrative. Recycling and reexamini- nation of Israeli condition and Zionist condition and skepticism about telos or legitimacy of meta-narrative that fed blurred outline of Israeli identity and subvert its un- derpinning formative myths. They simultaneously dis- play loss of faith in representative dimension of lan- guage, including ability of texts to penetrate to its hidden meaning. Using periphery discourses, these texts strive to change modernist aesthetic and power paradigm. P/NP or letter grading.
125. Hebrew Biblical Historical 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.
126. Biblical Texts. (4) Lecture, three hours. Requi- sites: courses 103A, 103B, 103C. Readings in Maimonides, Talmud, and/or Midrash. May be repeated for credit.
141. 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 Scrolls. 30, with focus on Hebrew language, 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, and 103C, or equivalent knowledge of Hebrew grammar: phonology and morphology. Topics include development of Hebrew language from biblical times to present day, its relation to Arabic and other Semitic languages, methods of language preservation 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 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
210. History of Hebrew Language. (4) Seminar, three hours. Development of Hebrew language in its classical period from archaic poetry through rabbinic Hebrew. Study of Biblical Hebrew and its influence on languages of the Jewish diaspora, as well as important Jewish communities, Hebrew contribution to other Jewish languages (Yiddish, Ladino, Judeo-Arabic) with particular emphasis on development of Hebrew language from biblical times to present day, its relation to Arabic and other Semitic languages, methods of language preservation 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.
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 inter- pretation 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 Judeo-Arabic texts by Mai- 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 studying Biblical Hebrew. Special attention to literary and historical study of various biblical books. Reading, analysis, and interpretation of Hebrew literature composed during Second Temple period. Relevant sources include Chronicles, Ezra-Nehemiah, Ecclesi- astes, Ben Sir, Daniel, Dead Sea Scrolls, and other documents from Judean desert, and various apocrypha and pseudepigrapha. Special attention to histori- cal development of Hebrew language and literature in relation to both earlier biblical Hebrew and other languages, grammar, and syntax and to subsequent Rabbinic writings. Course builds following skills: reading unpointed texts, mastering distinctive elements of Hebrew grammar, and syntax of Second Temple Hebrew, and analyzing relationships between biblical and postbiblical sources. May be repeated for credit. S/U or letter grading.
240. Modern Hebrew Poetry and Prose. (4) Lecture, three hours. Requisites: courses 103A, 103B, and 103C, or equivalent knowledge of Hebrew. Study of
596. Directed Individual Study. (2 to 8) Tutorial, to be arranged. May be repeated for credit. S/U or letter grading.


Iranian

Lower Division Courses

1A-1B-1C. Elementary Persian. (5-5-5) Lecture, six hours. Course 1A is enforced requisite to 1B, which is enforced requisite to 1C. Not open to students with prior knowledge of Persian. P/NP or letter grading.

8. Elementary Persian: Intensive. (15) Lecture, 10 hours; discussion, 10 hours. Not open to students who have learned, from whatever source, enough Persian to qualify for more advanced courses. Intensive course equivalent to courses 1A, 1B, and 1C. Introduction to fundamentals of Persian, including pronunciation, grammar, and Persian script, with emphasis on all four basic language skills — speaking, listening comprehension, reading, and writing. Offered in summer only. P/NP or letter grading.


20A-20B-20C. Accelerated Elementary Persian. (6-6-6) Lecture, four hours; discussion two hours; laboratory, 30 minutes per day. Preparation: some knowledge of spoken Persian. Course 20A is enforced requisite to 20B, which is enforced requisite to 20C. Intensive and thorough study of fundamental structure of Persian grammar; reading from a wide range of classical and modern poetry and prose compositions. P/NP or letter grading.

Upper Division Courses

102A-102B-102C. Intermediate Persian. (5-5-5) Lecture, six hours. Requisite: course 1C or 20C. Course 102A is enforced requisite to 102B, which is requisite to 102C. P/NP or letter grading.

103A-103B-103C. Advanced Persian. (4-4-4) Lecture, three hours. Requisite: course 102C. Students who do exceptionally well in course 20C may be permitted to enroll with consent of instructor. Each course may be taken independently for credit. P/NP or letter grading.

103A. Introduction to Classical Persian Poetry. 103B. Introduction to Classical Persian Prose; 103C. Introduction to Contemporary Persian Poetry and Prose.

104. Philosophical Texts. (4) Lecture, three hours. Readings in English. Introduction to wide selection of philosophical texts in translation. Identification of major philosophical themes in ontology, epistemology, psychology, and cosmology through texts, with study in detail. P/NP or letter grading.

M110A-M110B-M110C. Iranian Civilization. (4-4-4) (Same as Ancient Near East M110A-M110B-M110C and History M110A-M110B-M110C) Lecture, three hours; discussion, one hour (when scheduled). History of ancient Iran from the Elamite to Sassanian dynasties — Elamite civilization and Mede, Achaemenid, Arsacid, and Sassanian Empires. Emphasis on ancient Iran, but may be offered for early Islamic period. P/NP or letter grading.

111A-111B-111C. Elementary Kurdish. (4-4-4) Lecture, three hours; laboratory, two hours. Proficiency-based course in the oral language of Kurdish (Sorani). Graded readings, translation, composition (level one), conversation (levels one and two).

120. Comparative Study of Six Major Persian Poets. (4) Lecture, two hours; discussion, one hour. Pre-requisite: project required. 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. Requisites: 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.

141. Persian Analytical Prose. (4) Lecture, three hours. Requisite: 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. Requisite: 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 Persian not required. Each course may be taken independently for credit.

161A-161B-161C. Elementary Modern Iranian. (4-4-4) Lecture, three hours. Pre-requisite: knowledge of Persian descriptive course 161A is requisite to 161B, which is requisite to 161C. Studies in grammars and texts of Middle Iranian languages (e.g., Middle Persian, Pahlavi, Old Persian, Rumi, Bahari, Dehkhoda, and others). May be repeated for credit with consent of instructor. P/NP or letter grading.

169. Civilization of Pre-Islamic Iran. (4) Survey of Iranian culture from the beginning through Sassanian period.

170. Religion in Ancient Iran. (4) History of religion in Iran from the beginning to the Mohammadan conquest; Indo-Iranian background, Zoroastrianism, Manichaeanism, Mazdaism.


187. Variable Topics in Iranian Studies. (4) Lecture, three hours. Variable topics; consult Schedule or Classes for topics to be offered in specific term. May be repeated for credit. P/NP or letter grading.

188FL. Special Studies: Readings in Iranian. (2) Seminar, two hours. Requisite: course 102C. Students must be concurrently enrolled in course. Primary readings and advanced training in Iranian. Additional work in Iranian to enrich and augment work assigned in main course, including reading, writing, and other exercises in Iranian. P/NP or letter grading.

197. Individual Studies in Iranian. (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.

Graduate Courses


221. Rumi, Mystic Poet of Islam. (4) Seminar, three hours. Requisite: course 220A or 220B. Study of life and works of Rumi in context of interaction of Sufism and poetic creativity. May be repeated twice for credit.

M222A-M222B. Vedic. (4-4) (Same as South Asian M222A-M222B.) Lecture, three hours. Preparation: knowledge of Sanskrit equivalent to South Asian 110C. Characteristics of Vedic hymns and readings in Rig-Vedic hymns. Only course M222B may be repeated for credit. S/U or letter grading.


231A-231B-231C. Advanced Middle Iranian. (4-4-4) Lecture, three hours. Requisite: course 161C. Course 231A is requisite to 231B, which is requisite to 231C. Further studies in grammars and texts of Middle Iranian languages (e.g., Middle Persian, Pahlavi, 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. Requisites: 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.


Islamics

Upper Division Courses

110. Introduction to Islam. (5) Lecture, three hours; discussion, one hour. Genesis of Islam, its doctrines, and practices, with readings from the Qur’an and hadith; schools of law and theology; piety and Sufism; reform and modernism. P/NP or letter grading.

130. Shi’a in Islamic History. (4) Seminar, three hours; discussion, one hour. Rise and development of Shi’a Islam, its doctrines, and practices; major branch-es: Twelvers, Ismailis, Zaidis; their contribution to Islamic thought and civilization; modern trends of reinterpretation and redefinition. P/NP or letter grading.

151. Contemporary Islamic Thought. (4) Lecture, 90 minutes; discussion, 90 minutes. Recommended requisite: course 110. Based on original writings of major Islamic thinkers in English translation, provides balanced picture of enormous ideological variety found in Near Eastern Languages and Cultures / 491
Graduate Courses

201. Arabo-Islamic Sciences. (4) Seminar, three hours. Preparation: good reading knowledge of Arabic, English, and one other Western 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, and literature. Letter grading.

596. Directed Individual Study. (2 to 8) Tutorial, to be arranged. May be repeated for credit. Individual contract required. P/NP or letter grading.

597. Examination Preparation. (2 to 8) Tutorial, to be arranged. S/U or letter grading.


Upper Division Courses

130. Modern Jewish Religious Movements and Their Ideologies. (4) Lecture, three hours. Introduction to and overview of Jewish religious movements and evolution of their ideologies in the Western world from time of the Enlightenment to the present.

135. Jewish Law. (5) Lecture, 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.

140A-140B. American Jewish History. (4-4) Lecture, three hours. Examination of social and cultural history of American Jewish community from its inception to the present with emphasis on immigration of successive immigrants and development of institutions. P/NP or letter grading. 140A. 1654 to 1914; 140B. 1914 to the Present.

141. Modern Anti-Semitism. (4) Lecture, three hours. Examination of modern anti-Semitism from the 18th century to the present; comparison of modern racist ideologies with premodern theories; case studies (e.g., Dreyfus affair, Beilis Trial, Holocaust); Jewish reactions to these phenomena.

142. Modern Israel: Politics, Society, Culture. (4) Lecture, three hours. Examination of evolution of Israel as its changing society, foreign and domestic policy, and dynamic culture — from its foundation in 1948 to present, in context of global political and cultural change and changing Jewish world. Focus on Jewish communal life in the state, role of individual. Analysis of formal aspects of each work. M150A. Modern Jewish Literature in English. (4-4) Lecture, three hours. Each course may be taken independently for credit. P/NP or letter grading. M150A-150B. Hebrew Literature in English. (4-4) Lecture, three hours. Each course may be taken independently for credit. M150A. Literary Traditions of Ancient Israel: Bible and Apocrypha. (Same as Comparative Literature M150A.) Study of literature of ancient Israel through examination of principal compositional strategies of biblical Hebrew and Apocrypha (read in translation). P/NP or letter grading. M150B. Rabbinic Judaism and its Literature: Jewish Religious Culture. (Same as Comparative Literature M165A.) Study of historical Jewish literature; Rabbinic Judaism; its original literary forms; rabbinic world-view; forms of medieval rabbinic literature; modern Jewish religious movements and their attitude to rabbinic Judaism. S/U grading.

151A-151B. Modern Jewish 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 M165A.) Study of Jewish literature written in Jewish language and reading of them in context of their historical backgrounds. 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 context of their historical backgrounds. P/NP or letter grading.


Variable Topics in Jewish Studies. (4) Lecture, three hours. Variable topics; consult Schedule of Classes for topics prior to registration. May be repeated for credit. P/NP or letter grading.

M181. Topics in Jewish History. (4) (Same as History M181.) 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.

M182A. Ancient Jewish History from Patriarchs to Rabbinics. (4) (Same as History M182A.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Survey of social, political, and religious developments. P/NP or letter grading. M182B. Between Cresecent and Cross: Jewish Middle Ages. (4) (Same as History 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. Jewish History, Spanish Expulsion to 1881. (4) (Same as History M182C.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Survey of early modern Jewish history beginning with enormously repercussions of expulsion of Jews from Spain in 1492, followed by transplantation of Jews to New World and Europe; history of Jews in general; political factors that shaped cultures of Europe's Jews from outbreak of First World War to present. Emphasis on diversity of Jewish cultures, religious groups and to great diversity of cultures; that Judaism as safe haven for Jewish people has been characterized by various positions on when and how to observe Judaism, that, founded as democracy, it contends with multiple strains on its democratic system, such as tensions between Jews and Arabs, secular and religious Jews, and disparate ethnic groups and to great diversity of cultures; that it was envisaged as safe haven for Jewish people but has been characterized by various positions on when and how to observe Judaism, that, founded as democracy, it contends with multiple strains on its democratic system, such as tensions between Jewish and Arab, secular and religious Jews, and disparate ethnic groups. P/NP or letter grading.

182D. European Jewry, 1881 to Present. (4) (Same as History M182D.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Examination of Jewish history with emphasis on major trends in Jewish intellectual history from 18th century to present. P/NP or letter grading.

182G. Spirit of Secularism: Jewish Cultures in Secular Age, (4) (Same as History M182G.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Examination of emergence of distinct forms of Jewish culture in modern age, particularly those that challenge traditional forms of Jewish religious culture (e.g., laws, customs, rituals). P/NP or letter grading.

184A. American Jewish Civilization: Encounter with Great World Cultures. (4) (Same as History M184A.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Survey of origins and development of American Jewish civilization; cultural, intellectual, political, social and economic development of American Jewish civilization. P/NP or letter grading.

184B. History of Anti-Semitism. (4) (Same as History M184B.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Examination of American Jewish civilization. P/NP or letter grading.

184C. American Jewish Experience. (4) (Same as History 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.

184D. History of State of Israel, 1948 to Present. (4) (Same as History 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.

187. Holocaust in Literature. (4) (Same as Comparative Literature M165.) Lecture, three hours. Examination of how Holocaust informs many of literary and cinematic works and raises wide range of aesthetic and moral questions. P/NP or letter grading.

191. Variable Topics Research Seminars: Jewish Studies. (2 to 4) Tutorial, one hour. Limited to juniors/seniors. Individual intensive study, with scheduled meetings to be arranged between faculty and student. S/U or letter grading. May be repeated for credit. Individual contract required. P/NP or letter grading.

194D. Jewish Intellectual History. (4-4) (Same as History M194D-E-M194F.) Lecture, three hours; discussion, one hour (when scheduled). Designed for seniors. Examination of most important currents and figures in Jewish intellectual history from 18th century to present. P/NP or letter grading.

200. Directed Research or Senior Project in Islamic Studies. (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.

210. Jewish History, Spanish Expulsion to 1881. (4) (Same as History M210A-C.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Examination of early modern Jewish history beginning with enormously repercussions of expulsion of Jews from Spain in 1492, followed by transplantation of Jews to New World and Europe; history of Jews in general; political factors that shaped cultures of Europe's Jews from outbreak of First World War to present. Emphasis on diversity of Jewish cultures, religious groups and to great diversity of cultures; that it was envisaged as safe haven for Jewish people but has been characterized by various positions on when and how to observe Judaism, that, founded as democracy, it contends with multiple strains on its democratic system, such as tensions between Jews and Arabs, secular and religious Jews, and disparate ethnic groups. P/NP or letter grading.

215A. Modern Jewish Literature in English. (4-4) Lecture, three hours. Each course may be taken independently for credit. P/NP or letter grading. 215A-215B. Hebrew Literature in English. (4-4) Lecture, three hours. Each course may be taken independently for credit. 215A. Literary Traditions of Ancient Israel: Bible and Apocrypha. (Same as Comparative Literature M150A.) Study of literature of ancient Israel through examination of principal compositional strategies of biblical Hebrew and Apocrypha (read in translation). P/NP or letter grading. 215B. Rabbinic Judaism and its Literature: Jewish Religious Culture. (Same as Comparative Literature M165A.) Study of historical Jewish literature; Rabbinic Judaism; its original literary forms; rabbinic world-view; forms of medieval rabbinic literature; modern Jewish religious movements and their attitude to rabbinic Judaism. S/U grading.

215A-151B. Modern Jewish Literature in English. (4-4) Lecture, three hours. Each course may be taken independently for credit. P/NP or letter grading. 215B. Rabbinic Judaism and its Literature: Jewish Religious Culture. (Same as Comparative Literature M165A.) Study of historical Jewish literature; Rabbinic Judaism; its original literary forms; rabbinic world-view; forms of medieval rabbinic literature; modern Jewish religious movements and their attitude to rabbinic Judaism. S/U grading.

240A-240B. American Jewish History. (4-4) Lecture, three hours. Examination of social and cultural history of American Jewish community from its inception to the present with emphasis on immigration of successive immigrants and development of institutions. P/NP or letter grading. 240A. 1654 to 1914; 240B. 1914 to the Present.

241. Modern Anti-Semitism. (4) Lecture, three hours. Examination of modern anti-Semitism from the 18th century to the present; comparison of modern racist ideologies with premodern theories; case studies (e.g., Dreyfus affair, Beilis Trial, Holocaust); Jewish reactions to these phenomena.
Graduate Course


Near Eastern Languages

Lower Division Courses

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 communication in human societies. 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 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 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.

50A. First Civilizations. (5) Lecture, three hours; discussion, one hour. Survey of great civilizations of ancient Near East — Egypt, Israel, and Mesopotamia — with attention to emergence of writing, monotheism, and urban societies. Letter grading.


50C. Introduction to Near Eastern Cultures. (5) Lecture, three hours; discussion, one hour. Survey of modern Middle Eastern cultures through readings and films from Arab countries, Iran, Turkey, and Israel. Letter grading.

Graduate Courses

200. Bibliography and Method of Near Eastern Languages and Literatures. (4) Lecture, two hours. Required for M.A. degree. Introduction to bibliographical research in methods of research in various areas of specialization offered by department. May be repeated for credit.

201. Study of Religion: Theory and Method. (4) Seminar, three hours. Preparation: familiarity with at least two major world religions. Designed for advanced under- and graduate students. Introduction to variety of theories and methods used in academic study of religion. In attempt to demonstrate importance that historical, cultural, and social exigencies play in development of religious traditions, discussion of theories comparatively and in their historical context, with focus on prescriptive aspects of research and concepts and implications of each theory. Letter grading.

210. Survey of Afro-Asiatic Languages. (4) Lecture, three hours. Survey of structures of a number of representative languages from various major branches of Hamito-Semitic (Afro-Asiatic) language family.


290. Seminar: Paleography. (4) Seminar, three hours. Provides students with ability to cope with varieties of manuscripts.

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 or letter grading.

495. Preparation for Teaching Language and Literature in Near Eastern Languages and Cultures. (2) Seminar, two hours. Preparation of two methods of preparing literary texts as exemplary materials in teaching of language and literature in Near Eastern Languages and Cultures. Theory and classroom practice, with individual counseling and faculty evaluation of teaching assistant performances. May be not applied toward M.A. degree 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 USC. S/U grading.

596. Directed Individual Study. (2 to 8) Tutorial, to be arranged. May be repeated for credit. S/U or letter 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. Old Babylonian syntax; reading of basic Old Babylonian texts.

142. Akkadian Literary Texts. (4) Lecture, three hours. Selected readings from Akkadian myths and epics, with introduction to historical tradition of the works and their literary structure.

197. Individual Studies in Semitics. (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 taken more than once. 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/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

210. Ancient Aramaic Dialects. (4) Lecture, three hours. Required: course 130. Reading of surviving inscriptions and papyri. Texts include Old Aramaic inscriptions, Egyptian Aramaic texts, Qumran Aramaic, and Targumic Aramaic. May be repeated for credit. S/U or letter grading.

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.


230. Seminar: Northwest Semitic Languages and Literatures. (4) Seminar, two hours. May be repeated for credit. S/U or letter grading.

240. Seminar: Akkadian Language. (4) Seminar, two hours. Readings of texts from various dialects of Akkadian; selected problems in linguistic analysis of Akkadian dialects. May be repeated for credit. S/U or letter grading.

240X. Seminar: Akkadian Language. (1) Seminar, two hours. Readings of texts from various dialects of Akkadian; selected problems in linguistic analysis of Akkadian dialects. Course for students who participate regularly in class meetings but without the homework required in course 240. May be repeated for credit. S/U grading.

241. Seminar: Akkadian Literature. (4) Seminar, two hours. Readings of texts from various Akkadian literary genres; selected problems in literary history and stylistic analysis. May be repeated for credit. S/U or letter grading.

424. Seminar: Akkadian Literature. (1) Seminar, two hours. Readings of texts from various Akkadian literary genres; selected problems in literary history and stylistic analysis. Course for students who participate regularly in class meetings but without the homework required in course 241. May be repeated for credit. S/U grading.

280A-280B-280C. Seminars: Comparative Semitics. (4-4-4) Seminar, two hours. 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.


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.

114A-114B-114C. Bashkir. (4-4-4) Lecture, three hours. Required: course 102A. Grammar, reading, and literary and folkloric texts.

115A-115B-115C. Elementary Azeri. (4-4-4) Knowledge of Russian, Turkish, and Iranian helpful. Grammatical competence at elementary level; knowledge of basic facts of Azeri grammar; reading comprehension with help of dictionary; ability to write simple compositions; basic conversational skill.


120A-120B-120C. Descriptive Grammar of Modern Literary Uzbek. (4-4-4) Lecture, three hours; discussion, one hour; laboratory, one hour. Required: courses 102A, 102B, and 102C, or 111A, 111B, and 111C,
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or 180. Systematic and comprehensive grammatical survey of modern literary Uzbek, official language of the newly independent Republic of Uzbekistan. Phonetics, morphology, syntax, paralemology, and lexiconology analyzed on today's native material. 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.

165. Islamic Literary Heritage of Central Asia. (4) Lecture, two hours; discussion, one hour. Systematic survey of Islamic and related documents perfused with both Turkish and Persian in Central Asia, with reading of primary sources in English translation. Study of special characteristics of Central Asian Islam.


170. Individual Studies in Turkic. (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.

190. Directed Research or Senior Project in Turkic. (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

210A-210B-210C. Introduction to Ottoman. (4-4-4) Lecture, three hours. Introduction to the literary language of post-Ottoman Empire from its foundation in the 14th to its overthrow in the 20th century. For students of history, literature, and religion of the Ottomans, Near East, and Central Asia. Topics include Arabic script as applied to Ottoman; Arabic and Persian elements in grammar and vocabulary. Readings of historical and literary texts.


235A-235B-235C. Middle Turkic: Karakhanid, Khorazmian, Mamluk-Kipchak, and Old Anatolian. (4-4-4) Lecture, three hours. Required: course 180. Survey of Middle Turkic documents. Textual and linguistic analysis of Middle Turkic texts from various literary genres.

240A-240B-240C. Advanced Ottoman. (4-4-4) Lecture, three hours. Required: courses 210A, 210B, and 210C. Emphasis on different genres of Ottoman writing (battles letters as well as various types of state documents) in elaborate high style of classical Ottoman period (15th to 19th century). Selections are read in manuscript to prepare students to read works in form in which they are likely to encounter them in their research.

250A-250B-250C. Islamic Texts in Chagatay. (4-4-4) Lecture, three hours. Required: courses 220A, 220B, and 220C. Philological and linguistic survey of basic Islamic source material written in Chagatay literary language. Reading and discussion of Chagatai texts on Islamic topics.

280A-280B. Seminars: Modern Turkish Literature. (4-4) Seminar, two hours; lecture, required. Course 102B. Specific issues and trends in development of Turkish literature from middle of 19th century to the present.


590. Directed Individual Study. (2 to 8) Tutorial, to be arranged. May be repeated for credit. S/U or letter grading.


Scope and Objectives

The Department of Neurobiology offers advanced training leading to the Ph.D. 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.

Finally, the overall objective of the Ph.D. program is to provide 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 (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 in neuroscience. The program is targeted toward highly qualified and self-motivated doctoral students who take advantage of a flexible curriculum characterized by extensive informal and formal interactions with faculty in small groups and on an individual tutorial basis. This training is structured to allow students extensive opportunities for critical examination of contemporary neuroscience literature and research and for the development of oral and written communication skills.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://www.gdnet.ucla.edu/
197. Individual Studies in Neurobiology. (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 readings and tangible evidence of mastery of subject matter required. May be repeated for credit. Individual written or research topics. S/U grading.

198. Directed Research in Neurobiology. (2 to 8) Tutorial, to be arranged. Limited to juniors/seniors. Supervised individual research or investigation under guidance of faculty mentor. Students in anatomy and related subject areas appropriate for training of particular 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 synapse, neuronal circuitry, and intrinsic and extrinsic modulatory systems. Introduction to neuronal microcircuits. Letter grading.

M200B. Cell, Developmental, and Molecular Neurobiology. (6) (Same as Molecular, Cell, and Developmental Biology M220 and Neuroscience M201.) Lecture, two hours; laboratory, two 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 neurotropic factors. P/NP grading.

M200C. Sensory Systems Neurobiology. (4) (Same as Neuroscience M221.) Lecture, two hours; discussion, two hours. Fundamental topics in sensory systems neurobiology concerning sensory transduction, taste and olfaction, audition, vision, and somatosensory system. P/NP grading.

M200D. Motor Systems Neurobiology. (4) Lecture, four hours. Fundamental topics in motor systems neurobiology, including muscle, motor units, and motor neuron pool, spinal motor control, reflexes, locomotion, basal ganglia, cerebellum, and eye movements. Letter grading.

M200E. Regulatory, Behavioral, and Cognitive Neurobiology. (6) Lecture, two hours; discussion, two hours; laboratory, two hours. Topics include hypothalamus, cardiovascular system, breathing, food intake and metabolism, respiratory system, body fluids, neuroendocrine systems, circadian timing, sleep and dreaming, psychosexual development, motivation, reward and addiction, cognitive development, object, face, and spatial recognition, learning and memory, language, and communication, and thinking and problem solving. Letter grading.

M200F. Cellular Neurophysiology. (4) (Same as Neuroscience M202 and Psychological Science M202.) Lecture, three hours; discussion, two hours. Topics include hypothalamus, cardiovascular system, breathing, food intake and metabolism, respiratory system, body fluids, neuroendocrine systems, circadian timing, sleep and dreaming, psychosexual development, motivation, reward and addiction, cognitive development, object, face, and spatial recognition, learning and memory, language, and communication, and thinking and problem solving. Letter grading.

M200G. Biology of Learning and Memory. (4) (Same as Molecular, Cellular, and Integrative Physiology M200G, Neuroscience M220, and Psychology M202.) Lecture, four hours. Molecular, cellular, circuit, systems, and cognitive neurophysiology 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 experimental techniques. Letter grading.

M201. Structural Neurobiology. (2) Lecture, two hours; discussion, two hours; laboratory, two hours. Introduction to molecular structure of chemical, electrical, and mixed signal transduction. Magnetic resonance imaging methods. Letter grading.

M202. Physiology and Neurobiology / 495. (Same as Physiological Science M202 and Psychological Science M202.) Lecture, three hours; discussion, two hours. Topics include hypothalamus, cardiovascular system, breathing, food intake and metabolism, respiratory system, body fluids, neuroendocrine systems, circadian timing, sleep and dreaming, psychosexual development, motivation, reward and addiction, cognitive development, object, face, and spatial recognition, learning and memory, language, and communication, and thinking and problem solving. Letter grading.

M208. Dynamics of Neural Microcircuits. (4) (Same as Neuroscience M267.) Lecture, two hours; discussion, two hours. Development of integrative understanding of neural microcircuits that underlie specific functions of sensory processing, generation, and coordination of motor activity, as well as generation and modulation of neural rhythms. Letter grading.


M265. Seminar: Neural and Behavioral Endocrinology. (2) Preparatory course for graduate endocrine, systems neurobiology subjects. Letter grading.

M266. Seminar: Neural and Behavioral Endocrinology. (2) Preparatory course for graduate endocrine, systems neurobiology subjects. Letter grading.


M295. Culture of Neurobiology. (2) Discussion, two hours. Outside readings, classroom discussions, short write-ups, and student presentations on current issues in neurobiology. Topics include networking, mentoring, publishing, grant system, authorship, and career opportunities. S/U grading.

M296. Research Seminar and Journal Club. (1) Seminar, one hour. Seminar and journal club with focus on current research topics and activities occurring within department. S/U grading.

M298A-298C. Advanced Topics in Neurobiology. (2-2-2) Seminar, one hour; discussion, one hour. Advanced seminar conducted by faculty members to be offered by different departmental faculty members. Topics are grouped thematically. S/U grading.

M298A. Sensory, Motor, and Developmental Neurobiology; M298B. Sensory, Motor, and Developmental Neurobiology; M298C. Regulatory, Behavioral, and Cognitive Neurobiology.

M299. Preparation for Teaching in Anatomical Sciences. (2 to 4) Seminar, to be arranged. Designed for graduate students. Observation and practice of methods of teaching in anatomy, including preparation of material, participation in laboratory instruction, and presentation of reviews with departmental faculty and faculty criticism. Gross anatomy, microscopic anatomy, and neuroanatomy subject fields included. May not be applied toward degree requirements. S/U grading.

M301. Cooperative Program. (2 to 6) 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.


M303. Preparation for M.S. Comprehensive Examination or Ph.D. Qualifying Examinations. (2 to 12) To be arranged. Observation and practice of methods of teaching in anatomy, including preparation of material, participation in laboratory instruction, and presentation of reviews with departmental faculty and faculty criticism. Gross anatomy, microscopic anatomy, and neuroanatomy subject fields included. May not be applied toward degree requirements. S/U grading.

NEUROLOGY
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Barbara Giesser, M.D., M.P.H., Vice Chair of Academic Affairs
Mark Morrow, M.D., Vice Chair, Harbor-UCLA
Alan Shevmon, M.D., Vice Chair, Olive View-UCLA
Claude G. Wasterlain, M.D., Vice Chair, VA Southern California

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 an advanced laboratory methods course 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.

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Scott H. Chandler, Ph.D., Chair

Faculty Committee
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Carlos V. Grijalva, Ph.D. (Psychology)
Patricia E. Phelps, Ph.D. (Integrative Biology and Physiology)
Joseph B. Watson, Ph.D., in Residence (Psychiatry and Biobehavioral Sciences)

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 B.S.
Capstone Major

Preparation for the Major

Life Sciences Core Curriculum

Required: Life Sciences 1, 2, 3, 4, 23L; Chemistry and Biochemistry 14A, 14B, 14BL, 14C, 14CL, and 14D, or 20A, 20B, 20L, 30A, 30AL, 30B, and 30BL; Mathematics 3A, 3B, and 3C, or 31A, 31B, and 32A; Physics 1A, 1B, 1C, 4AL, and 4BL, or 6A, 6B, and 6C; one course from Statistics 10 or 13.

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, 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 at http://www.admissions.ucla.edu/prospect/adm_tr.htm 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, M101B, M101C, 102, Chemistry and Biochemistry 153A, 153L. 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, M148, C177, 180, 181, 182, 191C, Physiological Science C126, M145, 146, 147, M148, M181, or Psychology M117J.


Capstone Research Options: (1) Neuroscience 101L or (2) Neuroscience 198A and 198B, or A99A and A99B. 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 A99A and A99B option must take as many upper division electives as possible.
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 Neuroscience 198 or 199 in any combination) may be applied toward the major. Each course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better in all upper division courses taken for the major.

Honsors Program

The honors program provides exceptional Neuroscience majors with the opportunity to do research culminating in an honors thesis. Majors who have completed all preparation courses with a grade-point average of 3.0 or better and an overall GPA of 3.2 or better may apply for admission to the honors program. Applications and program requirements are available in the Neuroscience Undergraduate Office and at http://www.neurosci.ucd.edu. Students must submit the application before beginning their upper division honors requirements. After completion of all requirements and with the recommendation of the faculty sponsor and a second reader of the thesis, the chair confers honors at graduation.

Neuroscience Minor

The Neuroscience minor is designed to allow students in other majors an opportunity to explore the interdisciplinary field of neuroscience in a structured and rigorous way, while pursuing a major field of study in another discipline at the same time.

To enter the minor, students must have an overall grade-point average of 2.0 or better and a 2.5 GPA in the requisite courses for Neuroscience M101A and M101B.

Nonscience majors wishing to minor in Neuroscience should be aware that preparation courses in chemistry, life sciences, and physics are requisites to the upper division course requirements.

Required Upper Division Courses (approximately 31 units): Neuroscience M101A, M101B, M101C, M101D (15 units each) and four elective courses selected from 101L, 102, 199A and 199B, and from any of the three elective options listed under the Neuroscience major.

No more than two courses may be applied toward both this minor and a major or minor in another department or program.

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.

Neuroscience

See the Neuroscience Interdepartmental Graduate Program for the graduate course offerings.
gene(s) involved in these processes. Emphasis on mouse models, but other model organisms considered as well.

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 circuitry, genetic and molecular approaches to learning and memory. Learning and memory deficits in neuropsychiatric diseases. LTP and LTD models. Letter grading.

182. Pharmacology and Abnormal Behavior. (4) Seminar, four hours. Enforced requisite: course M101A. Not open for credit to students with credit for course 191A. Seminar 3. Pharmacology of stimulants, depressants, hallucinogens, and addictive drugs. Focus on how drugs interact with central nervous system and produce dependence, addiction, and chronic toxic affects. Letter grading.

191A-191B-191C. Variable Topics Research Seminars: Neuroscience. (4-4-4) Seminar, three hours. Topics on one or more aspects of neuroscience. Reading, discussion, and development of culminating project. May be applied as elective only in specific area of group B. Enforced requisite once for credit. P/NP or letter grading. 191A. Behavioral and Cognitive Neuroscience. Requisite: course M101A or Psychological Science 111A. Systems and Integrative Neuroscience. Requisite: course M101A or Psychological Science 111A, 191C. Molecular, Cell, and Developmental Neuroscience. Enforced requisite: course M101B.

191H. Honors Seminars: Neuroscience. (4) Seminar, four hours. Preparation: one statistics course (Statistics 10 or equivalent). Limited to neuroscience honors program students. Introduction in principles of scientific method, ethics, and written and oral communication; critique of current journal articles and research projects. Presentation of individual research. May not be applied toward elective requirements for major. May be taken during Winter Quarter of academic year that students enroll in courses 198A and 198B. Letter grading.

192. Practicum in Neuroanatomy for Undergraduate Assistants. (2) Seminar, three hours; laboratory, one hour. Requisites: courses M101A and 102, with grades of A. Limited to senior Neuroscience majors. Training and supervised practicum in neuroanatomy 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: Neuroanatomy K-12 Outreach. (4) (Formerly numbered 192.) Seminar, one hour; fieldwork, three hours. Limited to juniors/seniors. Course to teach to children in the K-12 educational system and teaching assistant advisers. Project Brainstorm is K-12 science education outreach program of Brain Research Institute (BRI) and Neuroscience Ph.D. 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 prepare age-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.


198A. Honors Research in Neuroscience. (4) Tutorial, 12 hours minimum. Requisites: courses 99, M101A. Limited to neuroscience honors program students. Directed independent research involving extensive reading, participation in laboratory, 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. Continued reading and research 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 99, M101A. Limited to junior/senior Neuroscience majors and minors and those interested in better understanding of how supervised individual research or investigation under guidance of faculty mentor. Culminating paper or project required. Maximum of 8 units of courses 198A, 198B, 199A, 199B may be applied toward major. Individual contract required. In Progress grading (credit to be given only on completion of course 199B).

199B. Directed Research in Neuroscience. (4) Tutorial, 12 hours minimum. Enforced requisite: course 199A. Specific topic areas include neuronal ultrastructure, synaptic transmission, and LTD models. Letter grading.

199C. Continued Directed Research in Neuroscience. (4) Tutorial, 12 hours minimum in laboratory. Enforced requisite: course 199B or 199B. Limited to junior/senior Neuroscience majors and minors with grades of B (3.0) or better. Continued reading and research that culminate in report under direct supervision of faculty mentor. May not be applied toward major. May be repeated for credit. Individual contract required. Letter grading.

199D. Directed Research in Neuroscience. (4) Tutorial, 12 hours minimum. Enforced requisite: course 191A. Limited to junior/senior Neuroscience majors and minors with grades of B (3.0) or better. Continued reading and research that culminate in report under direct supervision of faculty mentor. May not be applied toward major. May be repeated for credit. Individual contract required. Letter grading.

NEUROSCIENCE Interdepartmental Graduate Program David Geffen School of Medicine UCLA 1506D Gonda Center Box 951761 Los Angeles, CA 90095-1761 (310) 825-8153 fax: (310) 206-5855 e-mail: neugrad@mednet.ucla.edu http://www.neuroscience.ucla.edu Michael S. Levine, Ph.D., Chair Faculty Committee Dean V. Buonomano, Ph.D. (Neurobiology, Psychology) S. Thomas Carmichael, Jr., M.D., Ph.D. (Neurology) Ellen M. Carpenter, Ph.D., in Residence (Psychiatry and Biobehavioral Sciences) Marie-Françoise Chesselet, M.D., Ph.D. (Neurobiology, Neurology) Christopher J. Evans, Ph.D., in Residence (Psychiatry and Biobehavioral Sciences) David L. Glanzman, Ph.D. (Integrative Biology and Physiology, Neurobiology) Karen H. Gylys, R.N., (Nursing) Franklin B. Krase, Ph.D. (Psychology) Michael S. Levine, Ph.D., in Residence (Psychiatry and Biobehavioral Sciences) Kelsey C. Martin, M.A. (Molecular and Medical Biochemistry, Psychiatry and Biobehavioral Sciences) Alvaro Sagasti, Ph.D. (Molecular, Cell, and Developmental Biology) Richard W. Olsen, Ph.D. (Molecular and Medical Pharmacology) Diane M. Papazian, Ph.D. (Psychology) Alvaro Sagasti, Ph.D. (Molecular, Cell, and Developmental Biology) Eric J.N. Vilain, M.D., Ph.D. (Human Genetics)

Scope and Objectives The Interdepartmental Neuroscience Ph.D. Program prepares students for careers in neuroscience research and education. The hallmark of the program is an integrated approach to study of the nervous system, using the multi-level analytical tools of molecular, cellular, systems, and/or behavioral biology, as well as quantitative approaches from the fields of mathematics, physics, and engineering. Students working at one or two analytical levels nevertheless learn to appreciate the methods and advantages of other levels of analysis. Emphasis is both on mechanisms of neural function and the biological basis of disease. Students select their research mentor from the list of all neuroscience faculty at UCLA.

Graduate Study Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://www.gdnet.ucla.edu/ gassaa/library/pgmrqintro.htm. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degree The Neuroscience Program offers the Doctor of Philosophy (Ph.D.) degree in Neuroscience.

Neuroscience Graduate Courses

M201. Cell, Developmental, and Molecular Neurobiology. (6) (Same as Molecular, Cell, and Developmental Biology M220 and 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 neurotropic factors. Letter grading.

M202. Cellular Neuropathology. (4) (Same as Neuropathology M200F and Physiological Science M202.) Lecture, three hours; discussion, two hours. Requisites: Physiological Science 111A (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. Neuroanatomy: Structure and Function of Nervous System. (4) (Same as Biomedical Engineering M283.) Lecture, three hours; discussion/laboratory, three hours. Anatomy of central and peripheral nervous system at cellular histological and regional systems level, with emphasis on contemporary experimental approaches to morphological study of nervous system in discussions of circuitry and neurochemical anatomy of major brain regions. Consideration of representative vertebrate and invertebrate nervous systems. 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 neuronal ultrastructure, cellular neurobiology, neuroanatomy, neural circuitry, and imaging. Letter grading.
205. Systems Neuroscience. (4) Lecture/discussion, four hours. Introduction to fundamentals of systems neuroscience with emphasis on integration of molecular mechanisms, cellular processes, anatomical circuits, and behavioral analysis to understand function of neural systems. Letter grading.

M206. Neuroengineering. (4) (Same as Biomedical Engineering M255A, Electrical Engineering M255B.) Lecture, four hours; laboratory, three hours; outside study, five hours. Requisites: Mathematics 32A, Physics 1B or 6B. Introduction to principles and technologies of biotechnology and neural signal recording, processing, and stimulation. Topics include biotechnology, electrophysiology (action potentials, local field potentials, EEG, ECOC), intracellular and extracellular 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.

210A-210B-210C. Introduction to Current Literature in Neuroscience. (2-2-2) Discussion, two hours. Critical perspective of current research in neuroscience with emphasis on topics related to topics of the five core courses in neuroscience graduate curriculum. S/U grading.


215. Variable Topics Research Literature Seminars: Neuroscience. (1) Seminar, two hours. Critical discussion and analysis of current literature for various neuroscience research topics. Only one topic may be taken for credit or can be applied toward neuroscience graduate requirements. S/U grading.

M220. Biology of Learning and Memory. (4) (Same as Molecular, Cellular, and Integrative Physiology M220A, Neurobiology M220B, and Biomedical Engineering M220C.) 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.

M221. Sensory Systems Neurobiology. (4) (Same as Neurobiology M220C.) Lecture, two hours; discussion, two hours. Fundamental topics in sensory systems neurobiology, including sensory transduction, taste and olfaction, audition, vision, and somatosensory systems. Letter grading.

M230. Molecular and Cellular Mechanisms of Neural Integration. (5) (Same as Physiological Science M210 and Physiology M210.) Lecture, four hours; discussion, one hour. Requisite: course 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 involving learning, sensory, motor, processing, and neuronal events in development and sexual differentiation. Letter grading.


240. Phenotypic Measurement of Complex Traits. (4) Lecture, three hours. Preparation: background in human genetics helpful. Integrative approach to understand gene to behavior pathways by examination of levels of gene expression, such as schizophrenia, Alzheimer’s disease, linking of these diverse approaches in genetic research to map out integrative system of understanding basis of complex human behavior. Emphasis on understanding of methods used at each level of phenotype analysis, along with major resources that can be accessed to gain insight to gene-behavioral links. Letter grading.

250. Neural Development and Repair. (4) Lecture, four hours. Specific training in neural development and repair. Each module offers different research topic and provides perspective on its relevance to human diseases, treatments, and unmet needs for future research. Letter grading.

255. Functional Organization of Behavior. (2) Lecture, two hours. Changes in neuronal properties supporting learned behavior. Different type of learning. Role of neurotransmitters and second messengers in changing ion channels of neurons to support associative learning versus long-term potentiation of neurotrophic factors. Letter grading.

M267. Advanced Magnetic Resonance Imaging. (4) (Same as Biomedical Physics M266 and Psychiatry M266.) Lecture, four hours. Starting with basic principles, presentation of physical basis of magnetic resonance imaging (MRI), with emphasis on developing advanced applications in biomedical imaging, including both structural and functional studies. Instruction more intuitive than mathematical. Letter grading.


M273. Neural Basis of Memory. (4) (Same as Psychology M270.) Lecture, 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.

275. Advanced Techniques in Neurobiology. (2) Lecture, one hour; laboratory, one hour. Preparation: basic biology and chemistry. Designed to provide introduction and, when possible, practical demonstration of the number of techniques used in neurochemical research, with emphasis on techniques used for identification, measurement, and visualization of compounds thought to be important as mediators of intercellular communication in central nervous system. S/U or letter grading.

CM277. Drugs of Abuse from Neurobiology to Policy and Education. (4) (Formerly numbered C277.) (Same as Community Health Sciences M280.) Lecture, four hours. Prerequisite: course M101A. Course ranges from synapse to society. Provides intensive didactic on current neuroscientific basis for understanding substance abuse and blends that 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 M277.

M285. Functional Neuroimaging: Techniques and Applications. (3) (Same as Biomedical Engineering M284, Biomedical Physics M285, Psychiatry M285, and Psychology M248.) Lecture, two 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 functional MRI experiment. S/U or letter grading.

M287. Dynamics of Neural Microcircuits. (4) (Same as Neuroscience M287.) Lecture, two hours; discussion, two hours. Development of integrative understanding of neural microcircuits that underlie specific functions of sensory processing, generation, and coordination of motor activity, as well as generation and modulation of neural rhythms. Letter grading.

M293. Culture, Brain, and Development Forum. (1) (Same as Anthropology M293, Applied Linguistics M292, Education M285, and Psychology M248.) Seminar, 90 minutes every other week. Interdisciplinary seminar series to provide students with exposure to current research in understanding complex relationship between culture, brain, and development. 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. Designated for students requiring special instruction or time to work on dissertation. S/U grading.

596. Directed Individual Study or Research. (2 to 12) Tutorial, to be arranged. S/U grading.

597. Preparation for Ph.D. Qualifying Examination. (2 to 12) Tutorial, to be arranged. S/U grading.

599. Dissertation Research for Ph.D. Candidates. (2 to 12) Tutorial, to be arranged. Designed for students requiring special instruction or time to work on dissertation. S/U grading.

NEUROSURGERY

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Chair
Neil A. Martin, M.D. (W. Eugene Stern Professor of Neurosurgery)

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 paradigms.

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 vertebral arteries, disorders of the pituitary gland, disorders of the spinal cord, meninges, and vertebral column, including those that may require treat-
ment by spinal fusion or instrumentation, and disorders of the cranial and spinal nerves throughout their distribution.

For further details on the Department of Neurosurgery, see http://neurosurgery.ucla.edu.

Nursing

Upper Division Course

199. Directed 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.

Scope and Objectives

A strong scientific basis underlies the teaching of nursing practice, leadership, and research. Related clinical experiences are arranged within the Reagan 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. A program designed for associate degree or diploma nurses provides an opportunity to learn about community-based nursing care while providing a foundation for entering the advanced practice nurse master's degree program. 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 Ph.D. 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 Undergraduate Council of the UCLA Academic Senate suspended admissions to the Nursing B.S. (R.N. to B.S.,postlicensure) program effective Fall Quarter 2011.

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 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.
Two undergraduate programs are offered: Nursing B.S. (Prelicensure) for nonnurses and Nursing B.S. (R.N. to B.S./Postlicensure) for registered nurses.

**Nursing B.S. 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. Diverse 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 Studies 1 or 10, Life Sciences 2, 3, Microbiology, Immunology, and Molecular Genetics 10, Nursing 10, 20, 50, 54A, 54B, Physiological Science 3, 13, 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: communications, human anatomy, human physiology, inorganic and organic chemistry, cells, tissues, and organs, molecular biology, and psychology.

**The Major**

**Required:** Biostatistics 100A, Nursing 115, 150A, 150B, 152W, 160, 161, 163, 164, 165A, 165B, 166, 167, 168, 171, 173, 174, and completion of a capstone senior scholarly project (course 168). 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).

**Nursing B.S. R.N. to B.S./Postlicensure**

The Undergraduate Council of the UCLA Academic Senate suspended admissions to the Nursing B.S. (R.N. to B.S/postlicensure) program effective Fall Quarter 2011.

The focus of the R.N. to B.S./postlicensure program is on community-based nursing care and cultural and human diversity. The curriculum is designed to assist registered nurses in gaining new knowledge needed for professional nursing in a changing society and to build on their earlier associate degree or diploma education.

The program also provides a bridge for students who may wish to prepare for advanced practice study at the graduate level.

Emphasis is placed, throughout the curriculum, on concepts related to (1) contributing to the viability of academic health centers through responsiveness to community needs, (2) improving care of the underserved in community clinics in inner-city urban and rural settings, and (3) redesigning the role of public (community) healthcare through community outreach, home-based health services, and population-based health promotion.

**Admission**

The School of Nursing strives to attract a culturally and ethnically diverse student population. Admission, beginning in the junior year, requires licensure as a registered nurse and a minimum of one year of full-time experience as an R.N. within the past five years, completion of requisite courses, scholarship, and attainment of a passing score on four Excelsior College Examinations. Students must have a grade of C or better in each requisite course and an overall grade-point average of 3.0 or better prior to admission.

Three recommendation forms and a written statement of purpose are also required. Diverse 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 in advanced practice nursing.

Transcripts of all high school and college work must be submitted to the UCLA Office of Undergraduate Admissions and Relations with Schools and the School of Nursing. Applicants already enrolled at UCLA need to submit transcripts to the School of Nursing.

**Preparation for the Major**

**Required:** Completion of each University and school requirement course with a grade of C or better (C– grade is not acceptable) prior to admission as follows: human anatomy (one course), sociocultural anthropology (one course), humanities (one or more courses), introductory or general microbiology with laboratory (one course), introductory organic chemistry (one course or one year of high school physics with laboratory with a grade of B or better), human physiology (one course), introductory psychology (one course), introductory sociology (one course).

**The Major**

**Required:** Completion of 76 to 85 units of lower and upper division coursework, including Biostatistics 100A, Chemistry and Biochemistry 14A, 14B, 14C, Life Sciences 2, 3, Nursing 50, 102, 109, 152W, 160, 168, 171, 173, 174, 200, 220, and one or more courses from 213A, 214F, 216F, 219A, 232F, and three 4-unit electives related to nursing to be selected with consent of the adviser, depending on student interest and area of concentration.

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, [http://www.gdnet.ucla.edu/gasaa/library/pgmrqintro.htm](http://www.gdnet.ucla.edu/gasaa/library/pgmrqintro.htm). 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 (M.S.N.) degree and the Doctor of Philosophy (Ph.D.) degree in Nursing. A concurrent degree program (Nursing M.S.N./Management M.B.A.) is also offered.

**Nursing**

**Lower Division Courses**

10. **Introduction to Nursing and Social Justice I.** (2) Lecture, two hours. Within context of history of nursing, introduction to practice of nurses, 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.

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 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. Requisites: 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

102. Professional Nursing in Culturally Diverse Communities. (5) Lecture, four hours; community experience, three hours. Introductory course to assist registered professional nurses in providing culturally sensitive nursing in context of complex and dynamic healthcare systems. Analyses include individual and population-based approaches to healthcare in dynamic multicultural communities. Letter grading.

105. Human Physiology. (4) Lecture, three hours; discussion, one hour. Designed for nursing students. Lecture and discussion, with emphasis on a correlational approach to anatomy and physiology of human body. P/NP or letter grading.

109. Human Diversity in Health and Illness. (4) (Formerly numbered C109.) Lecture, four hours. Human diversity in response to illness that nurses diagnose and treat, centering on culture and human health systems associated with diverse orientations related to ethnicity and gender. Provides conceptual base that nurses can use in clinical practice, research, teaching, and administration. Letter grading.


150A. Fundamentals of Professional Nursing. (4) (Formerly numbered 150B.) Lecture, four 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, and nursing process as clinical decision-making strategy essential to practice of professional nursing. Essentials of nutrition, 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. Fundamentals of Professional Nursing Laboratory. (1) Laboratory, three hours. Corequisite: course 150A. 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, and nursing process as clinical decision-making strategy essential to practice of professional nursing. Learning experiences in nursing skills laboratory and clinical settings. P/NP grading.

152W. Human Development/Health Promotion in Culturally Diverse Populations. (5) (Formerly numbered 152.) Lecture, four hours. Enforced requisite: English Composition 3 or 3H or English as a Second Language 36. Limited to nursing students. Introduction to primary prevention strategies as they pertain to infant development, including, using population-based approach to nursing care of diverse populations. Priorities in nutrition and reproductive health, including issues related to contraception and parenting, pre-child care, school-age health, and chronic illness prevention strategies for young and middle-aged adults; elderly who live independently in communities or within institutions. Analysis of influence of overarching population and governmental systems within U.S. Satisfies Writing II requirement. Letter grading.

158. Culture, Illness, and Healing. (4) (Same as Anthropology M158B.) Lecture, four hours. Medical anthropology is organized around holistic exploration of ways in which health, illness, and medical practices are socially and culturally mediated. Topics include health and illness in diverse societies, health and illness patterns of care seeking, therapeutic practices, and medical systems in context of different social and cultural settings, including our own. P/ NP or letter grading.

160. Secondary Prevention. (4) (Formerly numbered C160.) Lecture, four hours. Requisite: course 152. Corequisite: course 161. Screening and early detection of illness to prevent chronic or acutely deteriorating illness. Emphasis on human development and nursing care for patients and their families at earliest possible time to prevent disability or premature mortality. Examination of health problems of individuals within context of family, social and community systems, and interdisciplinary systems. Emphasis on differences in developmental stages in response to screening for early and late signs and symptoms of illness in ambulatory and acute care settings, community agencies, rehabilitation units, outpatient specialty clinics and surgical units, and home and community settings. Letter grading.


163. Medical-Surgical/Gerontology I. (9) Lecture, five hours; clinical, 12 hours. Requisites: courses 115, C160, 174. Examination of pathophysiological and psychosocial aspects of assessment and management of selected common acute and chronic problems of adult patients/clients with emphasis on social, cultural, and developmental influences. Integration of knowledge of pathophysiology, diagnostics, pharmacology, therapeutics, and communication concepts as applied to care of pediatric clients. Discussion of application of nursing process to problem solving and critical thinking. Letter grading.

165B. Tertiary Prevention and Care: Pediatrics. (3) Lecture, three hours. Requisites: courses 162A, 162B, 163, 164. Corequisite: course 167. Examination of pathophysiological and psychosocial aspects of assessment and management for selected acute and emergent problems of patients/clients across lifespan, with emphasis on social, cultural, and developmental influences. Building on prior knowledge and experience, integration of basic knowledge of pathophysiology, diagnostics, pharmacology, therapeutic interventions, and communication concepts as applied to care of pediatric clients. Discussion of application of nursing process to problem solving and critical thinking. Letter grading.

166. Medical-Surgical/Gerontology II. (9) Lecture, five hours; clinical, four hours. Requisites: courses 162A, 162B, 163, 164. Examination of pathophysiological and psychosocial aspects of assessment and management for selected acute and emergent problems of adult patients/clients with complex illness, including multifaceted assessment, health history, and diagnostic reasoning skills, with emphasis on social, cultural, and developmental influences. Integration of knowledge of pathophysiology, diagnostics, pharmacology, therapeutics, and communication concepts as applied to care of medical and surgical adult/geriatric patients. Supervised practicum experience within setting of multidisciplinary team on medical-surgical/geriatric clinical units, with focus on application of theory in clinical interpretation of assessment and diagnostic data for purpose of planning, implementing, and evaluating course of care for patients, both as individuals and cohorts. Intermediate-level assessment, health maintenance, and management of symptoms across lifespan. Letter grading.


168. Advanced Leadership and Role Integration. (5) Lecture, four hours; fieldwork, three hours. Leadership and management theory and practice, resource allocation and management, delegation, conflict resolution, legal implications and practice, managed care, evaluation of practice, continuous quality improvement, accreditation process for healthcare systems, and contemporary issues in workplace. Emphasis on integration of all professional role behaviors, application of research, and leadership-management of care as transi-
tion is made from student role to that of practicing nurse. Letter grading.


171. Public Health Nursing. (6) (Formerly numbered 171C). Lecture, three hours; clinical, nine hours. Requisites: courses 165A, 165B, 461, 464, 465. Communication and research competencies for 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 institutions, and public service agencies. Emphasis on communication and disease prevention at level of communities, aggregate, whole populations, and systems, both domestically and internationally. Letter grading.

195. Introduction to Research. (4) Lecture, four hours. Requisite: one hour. 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 analysis, and ethical conduct in research studies. Critique of research reports. P/NP or 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 mandatory. Letter grading.

188. Special Topics in Nursing. (4) Lecture, three hours; discussion, one hour. Limited to junior/senior Nursing majors. Sponsoring faculty to arrange reading and/or temporal or permanent courses, 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 supervision of a research faculty member. Requisite: prerequisite course 202A. May be repeated for credit. P/NP grading.

193. Journal Club or Speaker-Seminar Seminars: Nursing. (1) Seminar, two hours; outside study, four hours. Independent study. Graduate students. Discussion of readings selected from current literature of 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, four hours. Requisite: one hour. Limited to junior/senior Nursing majors. Individual study with scheduled meetings to be arranged between faculty member and student. Individual contract required. P/NP or letter grading.

197. Individual Studies in Nursing. (2 to 4) Tutorial, two hours. Limited to junior/senior Nursing majors. 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. 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 related to history of philosophy, history of science, and philosophy of nursing science. Genealogies of thought that underpin assumptions about knowledge and knowledge development in relation to discipline of nursing and of questions related to methods of inquiry and scientific reasoning. Contemporary schools of thought (modern and postmodern) analyzed, with emphasis on their philosophical and historical roots in relation to nursing scholarship and nursing science. Letter grading.

203A. Basic Statistics and Fundamentals for Analysis. (4) Lecture, four hours. Preparation: one upper division statistics course. Introduction to applied statistics, including design, analysis of variance, correlation techniques, and regression. Sample size calculations, parametric versus nonparametric tests, and concepts of database design, management using statistical package programs. Letter grading.

203B. Statistical Approaches for Complex Nursing Phenomena. (4) Lecture, four hours. Requisites: course 203A. Use of multiple linear regression, including model validation techniques, and principal components analysis, 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, one hour. 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. Requisites: course 202A. Introduction 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, focus groups), data analysis, and data interpretation. Scientific rigor and ethical concerns for research with human participants critically examined. Letter grading.


205C. Advanced Qualitative Research Methodology III. (4) Lecture, four hours. Requisite: course 205B. Advanced techniques for simultaneous collection and analysis of qualitative data. Expansion on traditional grounded theory analysis procedures by learning and applying statistical analysis and constructivist grounded theory techniques to analysis of data. Development of conceptual formulation (or grounded theory) of student-selected phenomenon based on pilot study data collected and analyzed as part of course. Letter grading.

206. Nursing Theory Development. (4) Lecture, four hours. Critical examination of theoretical and conceptual thinking in nursing and issues that continue to influence development of nursing knowledge and nursing science. Application of analytical and evaluative skills fundamental to development of theory in nursing and integral to use of theory in nursing research. Letter grading.

207. Quantitative Research Designs of Clinical Phenomena. (4) Lecture, three hours; discussion, one hour. Introduction to various research designs for testing clinical nursing phenomena. Emphasis on dynamic interaction between research process and theory, as well as on appropriate use of empirical and quasi-experimental or experimental designs among diverse populations. Approaches for evaluation of validity of various research designs, with analysis of related threats to validity of each design. Letter grading.


209. Human Diversity in Health and Illness. (4) (Formerly numbered 209L). Lecture, four hours. Human diversity in response to illness that nurses diagnose and treat, centering on culture and human belief systems associated with diverse orientations related to ethnicity and gender. Provides conceptual base that nurses can use in clinical practice, research, teaching, and administration. Letter grading.

210. Nursing Research I. (Formerly numbered 210A). Lecture, four hours. Designed for PhD students. Exploration of phenomena of interest to nurses in past and present in relation to traumatic events (across environments of control, health, and nursing). Investigation of state of science in nursing, with special focus on health service, biologic, vulnerable populations, and biobehavioral nursing research. Integration and synthesis of current and historical scholarly findings of particular phenomena in literature to identify meaningful gaps in knowledge and directions for future research. Letter grading.

211. Theoretical Foundations of Women's Health Nursing during Reproductive Years. Lecture, two hours; discussion, one hour. Theory and research on assessment and management of women's health issues during reproductive years. Clinical topics include gynecology, family planning, childbearing, and postpartum care, with emphasis on health promotion of women during reproductive years in primary care systems. Letter grading.

212. Health-Related Family Theory. (2) Lecture, two hours. Overview of conceptual frameworks related to contemporary family structure and functioning, with particular emphasis on health. Family is defined broadly to include nontraditional families and members with 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.

Strategies for data collection, and basic coding. Exploration of self-reflexivity and ethics in relation to entry to field, recruitment of pilot study participants, interview, and preliminary data analysis via analytic, theoretical, and reflective memos based on pilot study data collected as part of course. Letter grading.
214A. Seminar: Advanced Concepts in Oncology Nursing I. (2) (Formerly numbered 214, 214F.) Seminar, two hours. Enforced requisite: course 216B. Designed for adult/gerontology acute care oncology specialty nurses and oncology clinical nurse specialists. Synthesis, critique, and application of oncology research and evidence-based practice guidelines to support nursing management decisions in diverse populations. Theories and research related to health history/risk assessment, cancer diagnosis and staging, treatment, rehabilitation, oncologic emergencies, and management of symptoms and psychosocial issues to provide family-focused care. Examples focused on major drug classes. Letter grading.


215A. Qualitative Research Design and Methodology for Indigenous Communities. (5) (Same as American Indian Studies M202 and Health Services M202.) Seminar, three hours. Introduction to some key theoretical themes in American Indian studies and explorations and identifications of research methods and principles in research on American Indian cultures, societies, languages, and other issues. Quantitative methods (design, appropriate use), with emphasis on qualitative research methods emphasizing numbers in conducting research in American Indian country. Design of research and exploration of feasibility of researching topics. Letter grading.

215B. Qualitative Research Methods. (4) Lecture, five hours. Enforced requisite: course 231. Preparation for prescriptive authority, focus on major drug classes and their mechanisms of action, pharmacokinetics, adverse effects, and clinical uses. Advanced knowledge of and expectations for clients/patients with stable acute or chronic conditions. Letter grading.

216A-216B-216C. Adult/Gerontology Concepts for Advanced Practice Nurses in Acute Care I, II, III. (4-4-4) Lecture, four hours. Enforced requisites: courses 200, 231. Enforced corequisite for course 216A: course 224. Course 216A is enforced requisite to 216B, which is enforced requisite to 216C. Assessment and management of health problems affecting adult/gerontology population from late adolescence to senescence in acute care settings. Synthesis of knowledge from advanced courses in pathophysiology, pharmacotherapeutics, health promotion, and evidence-based psychosocial care and cultural constraints. Letter grading.


218C. (4) Lecture, four hours. Enforced requisite: course 218B. Project management, organizational communication, governance, change, introduction to change, introduction to organizations, risk management, liability, and ethics of administration decision making. Emphasis on issues affecting local, national, and international healthcare settings. Letter grading.


219A. Essentials of Accounting and Budgeting in Healthcare Administration. Lecture, two hours. Enforced requisite: requirements of management, organization, and administration presented in relation to techniques of account-
236. Essential Theoretical Foundations of Primary Care of Children. (4) Lecture, four hours. Requisite: course 225A. Theoretical family nurse practitioner framework to assume responsibility for health promotion and illness prevention, and maintenance and management of common developmental, behavioral, acute, and chronic health problems of children, and adolescents in primary healthcare settings. Presentation of conditions or disease, etiology and incidence, clinical findings, differential diagnosis, pharmacologic and treatment options of cognitive, addictive, and affective disorders and patient education measures. Examination of primary child health delivery model reliant on evidence-based knowledge, practice protocols, consultation, referral, and community resources. Letter grading.


239A-239B-239C. Assessment and Management in Adult Healthcare I, II, III. (4-4-4) Lecture, four hours. Letter grading.

239A. Assessment, diagnosis, and management of common adult healthcare problems. Application of biobehavioral theories to the assessment and management of chronic and acute adult healthcare problems and conditions, including urgent care. Presentation of multiple approaches needed for special populations requiring adult healthcare, including developmental, gender, life-stage perspectives, and functional impairment, such as chronic pain and disability. Demonstration of applications and evaluation of evidence-based interventions and clinical guidelines in adult population (adolescence through age old). Letter grading.

239B. Assessment, diagnosis, and management of chronic and acute adult healthcare problems. Application of biobehavioral theories to the assessment and management of chronic and acute adult healthcare problems and conditions, including urgent care. Presentation of multiple approaches needed for special populations requiring adult healthcare, including developmental, gender, life-stage perspectives, and functional impairment, such as chronic pain and disability. Demonstration of applications and evaluation of evidence-based interventions and clinical guidelines in adult population (adolescence through age old). Letter grading.

239C. Assessment, diagnosis, and management of chronic and acute adult healthcare problems. Application of biobehavioral theories to the assessment and management of chronic and acute adult healthcare problems and conditions, including urgent care. Presentation of multiple approaches needed for special populations requiring adult healthcare, including developmental, gender, life-stage perspectives, and functional impairment, such as chronic pain and disability. Demonstration of applications and evaluation of evidence-based interventions and clinical guidelines in adult population (adolescence through age old). Letter grading.


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 neuro-psychiatric assessment and diagnosis. Exploration of research underlying assessment and diagnosis of cognitive, addictive, and affective disorders, with emphasis on developing a biobehavioral nursing approach. Letter grading.

242G. 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 neuro-psychiatric assessment and diagnosis. Exploration of research underlying assessment and diagnosis of cognitive, addictive, and affective disorders, with emphasis on developing a biobehavioral nursing approach. Letter grading.


244. Biobehavioral Foundations of Health Promotion/Risk Reduction Systems: Population Level. (5) Lecture, four hours; discussion, two hours. Introduction to primary prevention strategies as they pertain to health and wellness across lifespan, using population-based approach to nursing care of diverse populations. Priorities in nutrition; re- productive health; injury prevention; and mental health. Letter grading.


246. Biobehavioral Foundations of Health Promotion/Risk Reduction Systems: Individual Level. (3) Laboratory, three hours. Focus on application to clinical practice settings that include culturally diverse population groups served by advanced practice nurses. Emphasis on differences in developmental stages in the assessment and management of selected psychosomatic disorders. Discussion of case management, outcomes coordination, leadership, risk anticipation, information technology, and research utilization of master’s entry clinical nurse (MECN) role as it relates to patient/citizen sphere of influence. Letter grading.

249. Meeting Health-Related Needs in Underserved Populations. (4) Lecture, four hours. Requisite: course 438A. Examination of systematic barriers within healthcare settings that limit access to those in greatest need of culturally appropriate interventions. Unmet healthcare needs often result in health disparities and compromising quality of life among underserved, low income, uninsured, marginalized populations. Analysis of current evidence-based strategies and interventions designed to address these clinical problems and improve outcomes in culturally competent manner. Presentation of context of healthcare financing, limited access, and public policy. Letter grading.

250. Ethical Issues, Social Justice, and History of Nursing. (5) Lecture, four hours; discussion, two hours. Emphasis on historical and sociopolitical aspects of the evolution of the role of the nurse and changes in the historical context of nursing practice. Letter grading.


253. Health Promotion/Risk Reduction Systems: Individual Level. (3) Laboratory, three hours. Focus on application to clinical practice settings that include culturally diverse population groups served by advanced practice nurses. Emphasis on differences in developmental stages in the assessment and management of selected psychosomatic disorders. Discussion of case management, outcomes coordination, leadership, risk anticipation, information technology, and research utilization of master’s entry clinical nurse (MECN) role as it relates to patient/citizen sphere of influence. Letter grading.

266. Healthcare Systems/Organizations. (4) Lecture, four hours. Development of understanding of ways health care is organized and delivered. Discussion of totality of healthcare systems, including establishment of public and private healthcare plans and delivery systems, development of managed care systems, common characteristics shared by HMOs/PPOs, and impact of managed care on nursing. Delivery of patient care within integrated care systems and on continuing basis. Emphasis on key theoretical ideas and financial concepts to nursing and healthcare organizations. Letter grading.

267. Healthcare Policy. (3) Lecture, three hours. Requisite: course 266. Analysis of healthcare policies and how political decisions and public healthcare delivery. Discussion of concepts related to policymaking, specifically how to formulate healthcare policy, how to affect political process, and stakeholder involvement in policy development and implementation. Development of understanding of increasing levels of public, governmental, and third-party participation in and scrutiny of direction and healthcare systems. Current mandated assembly bills and their effect on nursing. Concepts associated with escalating healthcare costs and cost containment efforts instilled by private and governmental sectors, as well as by individual healthcare institutions. Letter grading.


269. Quality Improvement and Population-Based Quality of Practice. (4) Lecture, four hours. Requisite: course 268. Principal elements related to quality improvement theories and practices in which quality management impacts delivery of patient-centered and value-driven care, including improved system performance and efficient use of fiscal resources, quality improvement, and patient-population quality practice at organizational level. Review of individual methods to improve patient-care outcomes such as organizational support, effective teamwork, and quality-improvement concepts in workplace. Emphasis on quality management, adverse outcomes, evidence-based clinical and cost-control decision making, patient safety and risk reduction, resource management, and external impacts on quality control. Letter grading.

270. Human Responses to Critical Illness. (4) Lecture, three hours; laboratory, one hour. Requisites: courses 464, 465. Pathophysiological concepts and nursing management for selected critical ill geriatric patients, with focus on effect of critical illness on individual and family health. Key diagnostic and therapeutic modalities that promote effective nursing management of individuals with critical illness addressed. Letter grading.

273. Advanced Seminar: Medical Anthropology. (2 to 4) Same as Anthropology M263Q. Community Health Sciences M244, 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.

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. Letter grading.


295A. Nursing Science Seminar. (1 Seminar, one hour. Introduction to nursing research methods, activities, and programs within specially straitens at UCLA School of Nursing. Emphasis on selected research subjects. S/U grading.

295B-295C. Nursing Science Seminars. (2-2) Seminar, two 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 organization funding sources, and evaluation criteria identified. Role of external sponsors, institutional and postdoctoral research, research activities, and professional development. S/U grading.

M298. Interdisciplinary Response to Infectious Disease Emergencies. (4) (Same as Community Health Sciences M256, Medicine M256, 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 activities are attended by students in Schools of Dentistry, Medicine, and Public Health during weeks two through five. Letter grading.

299A. Research Research Seminar. (2) Seminar, two hours. Seminar to assist students who are beginning careers in scientific research to understand issues of responsible conduct of research and protection of research subjects. S/U grading.

299B-299C. Nursing Research/Laboratory Experiences. (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 of teaching strategies. Requisites: courses 206, 207, 280. Seminar to assist students to prepare for careers in academic settings, with focus on teaching. S/U grading.

375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Preparation for apprentice personnel employment as teaching assistant, associate, or fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for curriculum development at UCLA. May be repeated for credit. S/U grading.

414A-414B. Clinical Practicum: Adult/Gerontology Acute Care Oncology Nurse Practitioners. (6-8) Clinic practicum, 16 hours (course 414A) and 22 hours (course 414B). Enforced requisite: course 416C. Course 414A is enforced requisite to 414B. Assessment and therapeutic interventions in oncology settings with diverse acute adult/growth/gerontology populations. Letter grading.

415A-416B. Adult/Gerontology Acute Care Nurse Practitioner Practicum I, II. (4-6) Clinic practicum, six hours. Enforced requisite: course 440. Course 416A is enforced requisite to 416B. Assessment and therapeutic interventions for selected health problems in acute adult/growth/gerontology populations. Developmental, health promotion, and maintenance needs of clients in relation to family, social, and cultural structures. Letter grading.

416C-416D. Adult/Gerontology Acute Care Nurse Practitioner Practicum III, IV. (4 to 6 each) Clinic practicum, 16 hours. Enforced requisite: course 416B. Course 416C is enforced requisite to 416D. Assessment and therapeutic interventions for selected health problems in acute adult/growth/gerontology populations. Developmental, health promotion, and maintenance needs of clients in relation to family, social, and cultural structures. Letter grading.

416E. Adult/Gerontology Acute Care Nurse Practitioner Practicum V, VI. (6 to 8) Clinic practicum, 24 hours. Enforced requisite: course 416D. Assessment and therapeutic interventions for selected health problems in adult/growth/gerontology populations. Developmental, health promotion, and maintenance needs of clients in relation to family, social, and cultural structures. 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, 219D. Synthesis, evaluation, and practical application of organizational theory in practice setting, with emphasis on content presented in course 218A, including organizational structure, processes, and outcomes. 418B. Requisites: courses 218A, 418A. Experience in organizational setting for synthesizing content from course 218B, including strategic planning and management, care delivery system, resource management, and management information systems, professional practice, and meeting accreditation and legal standards. 418C. Requisites: courses 218A, 418B. Experience in organizational setting for synthesizing and evaluating content from course 218C, including processes of project management, organizational communication, governance, development and change, diverse relationships within organization, management responsibility, and ethics of administration decision making.

418D. Nursing Administration Residency. (12) Clinic practicum, 33 hours; clinical conference, one hour. Requisites: courses 219B, 219D. Supervised experiential learning setting as student assumes leadership role in planning, managing, and evaluating administrative projects. Synthesizing of content from course 218B, including strategic planning and management, care delivery system, resource management, management information systems, professional practice, and meeting accreditation and legal standards. 418C. 418A-418B-418C. Nursing Practice Seminar. (3) Clinic practicum, one hour. Letter grading.

429A. Family Nurse Practitioner Practicum I, II. (4) Clinic practicum, 12 hours. Requisites: courses 200, 440. First of five clinical practices designed to prepare family nurse practitioners with knowledge, skills, and competencies necessary to assume role of primary healthcare provider for families and individual patients across lifespan. Use of family-focused framework of care for those who experience common acute and chronic illness, developmental transitions, and health problems. Emphasis on biopsychosocial maintenance, and risk reduction interventions across wide range of diverse populations. Focus on context of community, cultural awareness, and practice in interdisciplinary teams. Letter grading.

429B. Family Nurse Practitioner Practicum II. (4) Clinic practicum, 12 hours. Requisite: course 429A. Second of five clinical practices designed to prepare family nurse practitioners with knowledge, skills, and competencies necessary to assume role of primary healthcare provider for families and individual patients across lifespan. Use of family-focused framework of care for those who experience common acute and chronic illness, disability, and developmental transitions. Emphasis on health promotion, maintenance, and risk reduction interventions across wide range of
diverse populations. Preparation in variety of clinical settings to implement evidence-based practice guidelines and to provide basis for development of interventions and treatment for acute and chronic problems across lifespan. Letter grading.


445. Advanced Practice Nursing: Clinical Nurse Specialist Practicum. (6) Lecture, three hours; clinic, six hours. Restricted to graduate students only. Clinical-surgical/geriatric clinical units, with focus on application of theory in interpretation of assessment and diagnostic reasoning, with emphasis on implementation, and evaluating course of care for patients, both as individuals and cohorts. Beginning-level assessment, health maintenance, and management of symptoms across lifespan. Letter grading.


465. Medical-Surgical/Gerontology II. (9) Lecture, five hours; clinical, 12 hours. Requisites: courses 462, 463, 465. Second course in two-course sequence. Pathophysiologic and psychosocial aspects of assessment and management for selected acute and chronic problems of adults/patients, including psychosocial assessment, health history, and diagnostic reasoning skills and emphasis on social, cultural, and developmental influences and integration of basic knowledge of pathophysiology, pharmacology, therapeutic interventions, and communication concepts as applied to care of adult/geriatric patients. Supervised practicum experiences in multidisciplinary teams in clinical interpretation of assessment and diagnostic data for purpose of planning, implementing, and evaluating course of care for patients, both as individuals and cohorts. Beginning-level assessment, health maintenance, and management of symptoms across lifespan. 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 M.S.N. 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 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 or letter grading.

597. Individual Study for Comprehensive Examination. (2 to 4) Tutorial, to be arranged. Opportunity for individual graduate nursing students to prepare for comprehensive examination. May be repeated once for credit, but only 8 units may be applied toward M.S.N. degree requirements. S/U grading.

599. Research for and Preparation of Ph.D. Dissertation. (2 to 12) Tutorial, to be arranged. Individualized faculty supervision of Ph.D. dissertation research by student’s chair. May be repeated for credit, but only 8 units may be applied toward Ph.D. degree requirements. S/U grading.

199. Directed Research in Obstetrics and Gynecology. (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.

Obstetrics and Gynecology

Upper Division Course

199. Directed Research in Obstetrics and Gynecology. (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.

Ophthalmology

Upper Division Course

199. Directed Research in Ophthalmology. (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.

Oral Biology

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Francesco Chiapelli, Ph.D.
Robert H. Chiu, Ph.D.
Susan Kinder Haake, Ph.D., D.M.D.
Anahid Javid, M.P.H., Ph.D.
Diana Mesadi, D.D.S., Ph.D.
Kwok Wai Shi, Ph.D.
Igor Spiegelman, Ph.D.
Sotosicos Tadahiko, Ph.D., D.D.S.
Lawrence E. Wolinsky, D.M.D., Ph.D.
Cun-Yu Wang, Ph.D., D.D.S.
David T.W. Wong, D.M.D., M.S.C.

Associate Professors

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Kenneth T. Miyasaki, D.D.S., D.M.S., Ph.D.

Assistant Professors

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Reuben Kim, Ph.D., D.D.S.
Clarice Law, D.M.S., M.S.
Jeanne Nervina, Ph.D., D.M.D., M.S.

Adjunct Professors

Carl A. Maidia, Ph.D., M.A.
Robert Mertiri, D.D.S., M.S.

Adjunct Associate Professors

Yong Kim, Ph.D.
Ki-Hyuk Shin, Ph.D., M.S.
Craig D. Woods, D.D.S.

Adjunct Assistant Professors

Renate Lux, Ph.D.
Ting-Ting Wu, Ph.D.

Professor of Clinical Dentistry

Fariba S. Younai, D.D.S.

For further details on the Department of Ophthalmology and a listing of the courses offered, see http://www.jsei.org/education/.

Ophthalmology

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Chairs

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Anne L. Coleman, M.D., Ph.D. (Frances and Ray Stark Professor of Ophthalmology), Vice Chair
Sherwin J. Isenberg, M.D. (Laraine and David Geber Professor of Ophthalmology), Vice Chair, Harbor-UCLA

Scope and Objectives

Ophthalmology is the medical science that encompasses knowledge concerning the eyes and the visual system. Derived from many basic and clinical fields, this knowledge must be synthesized by the physician and applied to the prevention, diagnosis, medical management, and surgical therapy of ocular disease.

In response to the steadily increasing incidence and growing importance of ocular disorders, the Department of Ophthalmology and the Jules Stein Eye Institute (including the Doris Stein Eye Research Center) are closely coordinated to form a comprehensive center for research in the sciences related to vision, for the care of patients with disease of the eyes and related structures, and for education in the broad field of ophthalmology.

The Department of Ophthalmology provides instruction to medical students during the second, third, and fourth years. Through lectures, demonstrations, discussions, and the opportunity to observe patients and review data on cases with a variety of ocular conditions, students gain knowledge and experience in ophthalmology.

For further details on the Department of Ophthalmology, see http://www.jsei.org/education/.

Oral Biology

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Ting-Ting Wu, Ph.D.

Professor of Clinical Dentistry

Fariba S. Younai, D.D.S.
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, morphology, 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, http://www.gdnet.ucla.edu/gasalibrary/pgmrintro.htm. 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 (M.S.) and Doctor of Philosophy (Ph.D.) degrees in Oral Biology. A combined D.D.S./Oral Biology M.S. or Ph.D. or advanced certificate training/Oral Biology M.S. or Ph.D. is also offered.

Oral Biology

Graduate Courses

201A. 201C. Advanced Oral Biology. (3-3) Lecture, three hours. S/U or letter grading.

201A. Ontogeny. (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 of 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) (Formerly numbered 205.) Lecture, two hours. Designed for graduate oral biology students. Integration of didactic lectures in descriptive and inferential statistical techniques 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 and Evidence-Based Research. (2) Seminar, one hour; discussion, one hour. Requirements: 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 in methodology 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. Preparation: basic immunology. Discussion and analysis of current research dealing with immunological issues related to oral health, including HIV, opportunistic oral infections, periodontal pathology, oral immunopathology, caries immunology, endodontic immunology, etc. Letter grading.

208. Genomics and Proteomics in Oral Biology Research. (2) Lecture, one hour; discussion, one hour. Introduction and overview of gene expression and regulation in oral biology research. Techniques and guidelines for current methods of data derivation therefrom. Discussion of implications and applications of genomics and proteomics in diagnostic protocols such as saliva-based diagnostics. Letter grading.

209. Scientific Ethics. (2) Lecture, one hour; laboratory, one hour. Required course in scientific ethics for graduate students in Oral Biology M.S. and Ph.D. programs and for NRSA trainees in School of Dentistry. Letter grading.


212. Proseminar: Oral Biology Research. (2) Seminar, one hour; discussion, one hour. Introductory course for graduate M.S. students. Guest seminars on topics of research in 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 pathology and how both systems talk to each other. Topics include immune modulation of bone metabolism, osteoblastic niche for hematopoietic progenitors, adult bone marrow stem cell changes, and osteoimmunology in at-risk populations. Letter grading.

215A. Fundamentals of Immunology. (2) (Formerly numbered 215.) Lecture, two hours. Basic cellular and molecular mechanisms involved in responses mediated by immune effectors, with emphasis on immunopa-thology involved in autoimmunity, 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-lent discussions of current cutting-edge research developments in immunology. 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 format, advanced knowledge of relevant aspects of human biology as they apply to classic and current concepts of principles governing growth and development of craniofacial region and related structures. Letter grading.

227. Dental Embryology and Histology. (2) Lecture, two hours. Description and interpretation of important stages in development of oral facial 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 oral facial apparatus with special significance to clinical dental specialists. S/U or letter grading.

228. Dental Pharmacology and Therapeutics. (2) Lecture, three hours. Survey of 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, biological, and linguistic anthropology 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 management, 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, and reproductive health, global trade in legal and illegal drugs, demography and health transition, structural adjustment, problems associated with globalization of pharmaceutical industry, biopiracy, and globalization and health equity. Letter grading.

234. Seminar: Developmental Neuroendocrinimmunology. (2) (Formerly numbered M234.) Lecture, two hours. Designed for graduate students. Psychological and biological aspects of health, and one important aspect of psychoneuroimmunological research is characterization of mechanisms that underlie these interactions. Examination of current literature on neuroimmune interaction from developmental perspective. S/U or letter grading.

M255. Interdisciplinary Response to Infectious Disease Emergencies: Dentistry Perspective. (4) Same as Community Health Sciences numbered M255, Medicine M256, and Nursing M256.) Lecture, three hours; discussion, one hour. Designed to instill in professional students ideas of common emergency health problems and coordinated response efforts, with special 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 Lymphology. (2) Lecture, one hour; discussion, one hour. Forum for discussion of cutting-edge topics in immunology and lymphology from clinical perspective. Emphasis is on immune surveillance and lymph node drainage of oral pathologies associated with AIDS and other diseases. Letter grading.

275. Molecular and Cell Biology for Oral Biology Graduate Students. (3) Lecture, one hour; 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 grading.


PATHOLOGY AND LABORATORY MEDICINE
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Tomasz Ganz, M.D., Ph.D.
Richard A. Gatti, M.D., Ph.D., in Residence
Steven J. Haislip, M.D., Ph.D.
Wayne W. Grody, M.D., Ph.D.
Oliver Hankinson, Ph.D.
Sharon L. Hirschowitz, M.D.
Jiachang Huang, M.D., Ph.D.
Jeryz W. Kupiec-Weglinski, M.D., Ph.D., in Residence
(Joan S. and Ralph N. Goldwyn Professor of Immunobiology and Transplantation)
Charles R. Lassman, M.D., Ph.D.
Stephen Lee, M.D.
Xinmin Li, Ph.D.
Paul Mischel, M.D. (Lya and Harrison Latta Endowed Professor of Pathology)
Scott D. Nelson, M.D.
Jian Yu Rao, M.D.
Nagesh P. Rao, Ph.D.
Elaine F. Reed, Ph.D., in Residence
Jonathan W. Said, M.D.
Kathleen M. Sakamoto, M.D.
Robert H. Schiestl, Ph.D.
Michael A. Teitel, M.D., Ph.D.
James G. Tidball, Ph.D.
Peter J. Tontonoz, M.D., Ph.D.
Harry V. Vinters, M.D.
Elizabeth A. Wagat, M.D.
Anna Wu Work, Ph.D.

Adjunct Professors
David S. Chia, Ph.D.
David W. Gertson, Ph.D.
Shaleen Metten, Ph.D.
Nora Rozengurt, Ph.D.
M. Elena Stark, M.D., Ph.D.
Robert B. Trelease, Ph.D.

Adjunct Associate Professors
Lee A. Goodgluck, Ph.D.
Joseph M. Miller, Ph.D.
David B. Seligson, M.D.

Adjunct Assistant Professors
Justin T. Schaefer, Ph.D.
Yin Sun, Ph.D.
Madhuri Wadehra, Ph.D.
Johathan J. Wilco, Ph.D.
Bo Wei, M.D., Ph.D.

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. See http://www.pathnet.medsch.ucla.edu/edc_p/cmp/home.php for more information.
Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://www.gdnets.ucla.edu/gasalib/pgmrqintro.htm. 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 Pathology and Laboratory Medicine offers Master of Science (M.S.) and Doctor of Philosophy (Ph.D.) degrees in Cellular and Molecular Pathology.

Pathology and Laboratory Medicine

Upper Division Course

199. Directed Research in Pathology. (2 to 4) Tutorial, 10 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


M215. Interdepartmental Course: Tropical Medicine. (2) Same as Medicine M215 and Pediatrics M215.) Lecture, two and one-half hours. Preparation: basic courses in microbiology and parasitology of infe-
tious diseases in School of Medicine or Public Health. Study of current knowledge about diseases prevalent in tropical areas of the 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.

M229. Molecular Mechanisms of Host/Pathogen Interaction. (4) Same as Microbiology M229.) Lecture, two hours; discussion, two hours. Requisites: Biologi-
cal Chemistry 236A-B. Basic 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 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.

M238. Histology and Pathology for Graduate Students. (2) Laboratory, two hours. Designed for UCLA ACCESS or Cellular and Molecular Pathology Ph.D. students. Basic introductory knowledge of normal tissue, pneumatocytic 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. Preparation: knowledge 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.


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 viral oncogenesis, development, and cellular regulation. S/U or letter grading.

M257. Introduction to Toxicology. (4) (Same as Pharmacology M257.) Lecture, two hours; laboratory, one hour. Preparation: knowledge of basic biochemistry, pharmacology, molecular biology, physiology, and statistics courses. Survey of entire landscape of nutrition, biochemical, and genetic aspects of obesity and diabetes and their microvascular and macrovascular complications. Review of descriptive and analytical epidemiology of these seemingly distinct yet clearly clustered disorders, including so-called metabolic syndrome. Study of distributions and determinants of these disorders in Westernized populations to appreciate how and why these epidemics occurred. Through case studies students learn process of generating etiologic hypotheses, using modern molecular epidemiologic methods. Techniques and principles of molecular genetics relevant to epidemiologic studies. Analysis of real data sets that include both genotype and phenotype information, with emphasis on examination of various gene/environment interactions. S/U or letter grading.

260. Immunopathology. (4) Lecture, two hours; dis-
cussion, one hour. Preparation: Immunobiology 261. Advanced information for graduate and advanced undergraduate students regarding immune system anatomy, lymphocyte development, acute and chronic inflammation, hypersensitivity, and autono-
munity. 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-
tamental hematology. Pediatric hematologic disorders provide important paradigm to study other developmental systems. Subjects include hematopoiesis, basic stem cell biology, angiogenesis, alternative models to study developmental hematology (zebrafish and Drosophila), basic physiology of normal and abnormal red blood cells, platelets, and white cells, leukemogenesis and novel therapeutics to treat leukemia, basic and clinical stem cell transplantation, state-of-the-art methods in developmental hematology (genomics, proteomics, and genomics), and clinical trials, and biomathematical modeling and statistics in develop-
tamental hematology. Letter grading.

M272. Stem Cell Biology and Regenerative Medicine. (4) (Same as Molecular, Cell, and Developmen-
tal Biology M272.) Lecture, two hours; discussion, two hours. Designed for graduate students. Presentation of current knowledge of embryonic and adult stem cells and factors that influence stem cell 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. Bio-
ethical and regulatory issues related to stem cell research. S/U or letter grading.

280. Clinical Aspects and Molecular Biology of Bone Marrow Failure Syndromes. (4) Lecture, two hours. Limited to graduate students. Focus on fundamental mechanisms of human disease in addition to normal and abnormal blood cell development. Topics include basic biology and clinical features of aplastic anemia, myelodysplastic syndromes, Dia-
mond Blackfan Anemia, and Fanconi Anemia. Sickle Cell Syn-
drome, Fanconi Anemia, Dyskeratosis Congenital, Para-
oxymal Nocturnal Hemoglobinuria, flow cytometry, and research approaches to study bone marrow failure syndrome. Journal club sessions include discussion of two journal articles per meeting — one clinical and one basic/translational. Students present at least one journal article and lead group discussion. S/U or letter grading.

294. Basic Concepts in Oncology. (4) Lecture, three hours. Fundamental biological, genetic, and molecular process involved in genesis and growth of cancer cells and diagnosis, characterization, and treatment of can-
cer. Letter grading.

296. Research Topics in Pathology. (1 to 2) Re-
search group meeting, one to two hours. Limited to de-
partmental graduate students. Advanced study and analysis of current topics in pathology. Discussion of current research and literature in research specialty of faculty member teaching course. May be repeated for credit. S/U grading.

298A-298D. Current Research in Disease Mecha-

isms. (2 each) Lecture, 90 minutes. Preparation: one course each in molecular biology, cell biology, and bio-

cological chemistry. Designed for graduate experimental pathology students. Current research in disease mech-

anisms, with strong emphasis on experimental ap-

proach in pathology. Topics include genetic and meta-

bolic disorders, thyroid disease, immunology, athero-


596. Directed Individual Study or Research. (4 to 12) Tutorial, to be arranged. Individual research with members of the staff or other departments, the latter for purpose of supplementing programs available in department. S/U grading.


599. Preparation of Ph.D. Dissertation. (2 to 12) Tu-

torial, to be arranged. Preparation: completion of quali-

PEDIATRICS

David Geffen School of Medicine

UCLA

22-412A Marion Davies Children’s Center

22-412A Marion Davies Children’s Center

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http://www.pediatrics.medsch.ucla.edu

Chairs

Sherin Devasark, M.D., (Matted Executive Endowed Professor of Pediatrics), Executive Chair

Rick E. Harrison, M.D., Vice Chair; Clinical Affairs

Thomas S. Kitzner, M.D., Ph.D. (Jack H. Skirball Professor of Pediatric Cardiology), Vice Chair, Academic Affairs

Lee T. Miller, M.D., Vice Chair, Medical Education

Kathleen M. Sakamoto, M.D., Vice Chair, Translational Research

Richard Findlay, M.D., Interim Chair, Drew University

Adam J. Jonas, M.D., Chair, Harbor-UCLA
Scope and Objectives

The Department of Pediatrics encompasses five teaching hospitals: Mattel Children's Hospital UCLA and Olive View-UCLA, Harbor-UCLA, Cedars-Sinai, and Santa Monica UCLA Medical Centers. The clinical program and teaching activities of the Reagan UCLA Medical Center are integrated with the Olive View-UCLA Medical Center. In the fundamentals of clinical medicine course, medical students receive detailed instruction in the techniques of the clinical examination of pediatric patients.

The required six-week clinical clerkship in pediatrics can be taken at any of five sites (a combined experience at Mattel/Olive View-UCLA and Santa Monica UCLA, Cedars-Sinai, Harbor-UCLA, Kaiser Los Angeles, and Riverside/Redlands). In-depth electives in the Department of Pediatrics are listed in the School of Medicine Handbook of Clinical Courses, as are the advanced clinical clerkships.

For further details on the Department of Pediatrics and a listing of the courses offered, see http://www.pediatrics.medsch.ucla.edu.

Graduate Course

M215. Interdepartmental Course: Tropical Medicine. (2) [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 the 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

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John P. Carriero, Ph.D., Chair
Barbara Herman, Ph.D., Vice Chair

Professors

Joseph Almog, D.Phil.
Tylor Burge, Ph.D.
John P. Carriero, Ph.D.
Brian P. Copenhaver, Ph.D. (Steven F. and Christine L. Udvar-Hazy Professor)
Barbara Herman, Ph.D. (Gloria and Paul Griffin Professor of Philosophy)
David B. Kaplan, Ph.D. (Hans Reichenbach Professor of Scientific Philosophy)
Gavin Lawrence, D.Phil.
Donald A. Martin, Ph.D.
Calvin G. Normore, Ph.D.
Terence D. Parsons, Ph.D.
Seana Shiffrin, D.Phil., J.D.

Professors Emeriti

Marilyn McComb Adams, Ph.D.
Robert Merrit Hew Adams, Ph.D.
Keith S. Donnellan, Ph.D.
Herbert Morris, Ph.D.

Associate Professors

Mark D. Greenberg, Ph.D.
Pamela Hieronymi, Ph.D.
Sheldon R. Smith, Ph.D.

Assistant Professors

Samuel J. Cumming, Ph.D.
Alexander J. Julius, Ph.D.

Lecturer

Andrew Hsu, Ph.D.

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 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 Ph.D. degrees.

Undergraduate Study

Philosophy B.A.

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 at http://www.admissions.ucla.edu/prospect/adm_tr.htm 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 should 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 both the graduate and undergraduate advisors.

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
Philosophy

Lower Division Courses

1. Beginnings of Western Philosophy. (5) Lecture, three hours; discussion, one hour. Origins of Greek cosmology and philosophy, beginning 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 Socrates and some earlier works of Plato in last few weeks. P/NP or letter grading.

2. Introduction to Philosophy of Religion. (4) Lecture, three 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, pre-existence, and what can be learned from religious experience.

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, causality, relations between mind, 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, exploitation of human subjects, rights of women. P/NP or letter grading.

5. Philosophy in Literature. (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.

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, inductive confirmation of hypotheses, and occurrence of scientific revolutions. Discussion at non-technical level of examples from history of science. P/NP or letter grading.

9. Principles of Critical Reasoning. (4) Nature of arguments: how to analyze them and assess soundness of the reasoning they represent. Common fallacies that often occur in arguments discussed in light of what counts as a 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., setting legal standards).

10. Skepticism and Rationality. (4) Lecture, three 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 Descartes, Hume, Leibniz, or Berkeley.

21. Ethical Theories of Responsibility. (4) Lecture, three hours; discussion, one hour. Not open for credit to students with credit for course 22W. Required in advance. Students may also substitute Philosophy 191 for either course.

22. Introduction to Ethical Theory. (5) Lecture, three hours; discussion, one hour. Enforced prerequisite: 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.

31. Logic, First Course. (4) Lecture, three hours; discussion, one hour. Recommended for students who plan to pursue more advanced studies in logic. Elements of symbolic logic and quantification; forms of reasoning and structure of language.

97. Freshman Seminar. (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.

100B. Medieval and Early Modern Philosophy. (4) Lecture, three hours; discussion, one hour. Preparation: one philosophy course. Strongly recommended prerequisite: course 100A. Course 100A and 100B 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.

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. Strongly recommended prerequisite: 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 knowl-
e

100C. History of Modern Philosophy, 1650 to 1800. (4) Lecture, three hours; discussion, one hour. Preparation: one philosophy course. Strongly recommended prerequisite: 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.

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, inter-

M103B. Later Ancient Greek Philosophy. (4) (Same as Classics M145B.) Lecture, three hours; discussion, one hour. Preparation: course M101A. Study of selected topics in middle and later dialogues of Plato, P/NP or letter grading.

M104. Islamic Philosophy. (4) Lecture, three hours; discussion, one hour. Preparation: one philosophy course. Development of Muslim philosophy in its great age (from Kindo to Avemore, 850 to 1200), considered in connection with Muslim theology and mysticism.

106. Later Medieval Philosophy. (4) Preparation: one philosophy course. Metaphysics, theory of knowledge, and ontologies of Duns Scotus, and Ockham, with less full discussion 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. Recommended requisite: 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 single area such as logic or theory of 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’ philosophical career, especially Leviathan, with attention to its relevance to contemporary political philosophy. May be concurrently scheduled with course C208. P/NP or letter grading.

C109. Descartes. (4) Lecture, four hours; discussion, one hour. Preparation: 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. Preparation: 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. P/NP or letter grading.

C111. Leibniz. (4) Lecture, three hours; discussion, one hour. Preparation: 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. P/NP or letter grading.

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, four hours. Preparation: one philosophy course. Selected topics from metaphysical, epistemological, and ethical writings of Hume. Limited to 40 students when concurrently scheduled with course C214. P/NP or letter grading.

C115. Kant. (4) Formerly numbered 115.) Lecture, three hours; discussion, one hour. Preparation: course 21 or 22. Study of early works on related topics in epistemology, ethics, and politics. May be repeated for credit with consent of instructor. Concurrently scheduled with course C215. P/NP or letter grading.

116. 19th-Century Philosophy. (4) Lecture, three hours; discussion, one hour. Preparation: one philosophy course. Selected topics in 19th-century thought. Limited to 40 students when concurrently scheduled.

117. Late 19th- and Early 20th-Century Philosophy. (4) Lecture, three hours; discussion, one hour. Preparation: one philosophy course. Selected topics in framework of one or more of following philosophers: Boziano, Fege, Husserl, Meinong, G. Moore, early Russell, and Wittgenstein. May be repeated for credit with consent of instructor.

118. 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 philosophes. 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

124. Philosophy of Science: Historical. (4) Lecture, three hours; discussion, one hour. Preparation: one philosophy course. Historical introduction to philosophy of science. Several general topics discussed in context of actual episodes in development of natural sciences. May be repeated for credit with consent of instructor.

125. Philosophy of Science: Contemporary. (4) Lecture, three hours; discussion, one hour. Preparation: 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.

126. 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, concepts of scientific explanation and prediction, nature of social laws).

127A. Philosophy of Language. (4) Lecture, three hours; discussion, one hour. Preparation: 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. P/NP or letter grading.

127B. Philosophy of Language. (4) Lecture, three hours; discussion, one hour. Preparation: course 127A. Course 127A is not requisite to 127B. Selected topics similar to those considered in course 127A, but at more advanced and technical level. May be repeated for credit with consent of instructor. P/NP or letter grading.

127C. Philosophy of Language. (4) Lecture, four hours; discussion, one hour. Preparation: 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. P/NP or letter grading.

128A. Philosophy of Mathematics. (4) Lecture, four hours. Preparation: courses 31, 137, and preferably one additional logic course. Philosophy of mathematics; logicism of Frege and Russell, arithmetic reduced to logic; ramified type theory and impredicative definition (Russell, Poincaré, early Weyl), P/NP or letter grading.


129. Philosophy of Psychology. (4) Lecture, three hours; discussion, one hour. Preparation: one 4-unit psychology course, one philosophy course. Selected philosophical issues arising in psychological theories. 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.

130. 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 relationalist views of space and time, philosophical implications of relativity theory.

131. Science and Metaphysics. (4) Lecture, four hours. Preparation: two philosophy courses. Recommended: some background in basic calculus and physics. Intensive study of one or two metaphysical topics on which results of modern science have been thought to have had major implications. Topics may include causality and direction of time, time-travel, backwards causation, realism, determinism, absolute view of space, etc. May be repeated for credit with consent of instructor. P/NP or letter grading.

132. Philosophy of Biology. (4) 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, concepts of biological species, and biological explanation. P/NP or letter grading.

133. Topics in Logic and Semantics. (4) Lecture, four hours. Preparation: course 137. Possible topics include formal theories, definitions, alternative theories of descriptions, many-valued logics, deviant logics. P/NP or letter grading.

M134. Introduction to Set Theory. (4) (Same as Mathematics M114E.) Lecture, three hours; discussion, one hour. Preparation: 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.


Group III: Ethics and Value Theory

150. Society and Morals. (4) Lecture, three hours; discussion, one hour. Preparation: course 22. Critical study of the structures and dynamics of society and its moral and social issues. May be repeated for credit with consent of instructor. P/NP or letter grading. 151A. Selected Classics in Ancient Ethical Theories: Plato, Aristotle: C151B. Modern. Intensive study of Kant’s ethical theory. May be repeated for credit with consent of instructor. May be concurrently scheduled with course C245; C151C. Selected Classics of Medieval Ethics.

153A. Topics in Ethical Theory: Normative Ethics. (4) Lecture, three hours; discussion, one hour. Preparation: course 22. Study of selected topics in normative ethical theory. Topics may include human rights, virtues and vices, principles of culpability and praiseworthiness (criteria of right action). May be repeated for credit with consent of instructor. P/NP or letter grading.

C153B. Topics in Ethical Theory: Metaphysics. (4) Lecture, three hours; discussion, one hour. Preparation: course 22. Study and analysis of basic concepts, selected problems and contemporary issues in metaphysics. 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 dilemmas, nature of reasons for action, rationality of moral norms 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 problems surrounding moral responsibility and free will, using contemporary or classical readings in attempt to better understand kind of freedom required for moral agents. May be repeated for credit. P/NP or letter grading.

155. Medical Ethics. (4) Lecture, three hours; discussion, one hour. Examination of philosophical issues raised by problems of medical ethics, such as abortion, euthanasia, and medical experimentation. P/NP or letter grading.

C156. Topics in Political Philosophy. (4) Lecture, three hours; discussion, one hour. Analysis of some basic issues in political theory. May be repeated for credit with consent of instructor. May be concurrently scheduled with course C247. P/NP or letter grading.

157A-157B. History of Political Philosophy. (4-4) Lecture, four hours; discussion, one hour. Preparation: two philosophy courses. May be repeated with consent of instructor. 157A. Reading and discussion of classic works in earlier political theory, especially those by Hobbes, Locke, Hume, and Rousseau. 157B. Reading and discussion of classic works in later political theory, especially those by Kant, Hegel, and Marx.

161. Topics in Aesthetic Theory. (4) Lecture, three hours; discussion, one hour. Preparation: one philosophy course. Examination, through study of recent philosophical writings, of such topics as nature of law, relations between mind and body, and our knowledge of other minds. May be repeated once for credit with consent of instructor.

166. Philosophy of Law. (4) Lecture, three hours; discussion, one hour. Preparation: one philosophy course. Examination, through study of recent philosophical writings, of such topics as nature of law, relations between mind and body, and our knowledge of other minds. May be repeated once for credit with consent of instructor.

170. Philosophy of Mind. (4) Lecture, three hours; discussion, one hour. Preparation: two relevant philosophy courses. Analysis of various problems concerning nature of mind and mental phenomena, such as relation of mind to body, free will, personal identity, and knowledge of other minds. May be repeated once for credit with consent of instructor.

172. Philosophy of Language and Communication. (4) Lecture, three hours; discussion, one hour. Requisites: courses 127A, 127B. Theories of meaning and communication; how words refer to things; limits of meaninglessness; analysis of speech acts; relation of everyday language to scientific discoveries. P/NP or letter grading.

174. Topics in Theory of Knowledge. (4) Lecture, three hours; discussion, one hour. Requisite: course 182 or 183. Selected topics in epistemology, such as skepticism, the nature of knowledge, and the role of evidence. May be repeated for credit. P/NP or letter grading.

176. Metaphysics of Modality. (4) Lecture, four hours. Requisites: courses 31, 137. Highly recommended preparation: one second course 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 the modal logic of a basic one logic or one theory? Is its logic local or modal necessity? Are both notions really distinct? How metaphysically involved is (quantified) modal logic? What is its connection to doctrines of (1) Haecceitism and (2) 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, and Camus. Emphasis on explication and interpretation of the texts. May be repeated for credit with consent of instructor.

182. Philosophy of Action. (4) Lecture, four hours. Preparation: one philosophy course. Examination of various concepts employed in understanding human action. Topics may include rational choice, desire, intention, weakness of will, and self-deception. 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 which we have knowledge; and answers, provided by alternative systems (e.g., phenomenological, 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 or two topics or works in metaphysics, such as personal identity, nature of dispositional possibility, necessity and universals and particulars, causality. Topics announced each term. May be repeated for credit with consent of instructor. P/NP or letter grading.

185. Major Philosophers of 20th Century. (4) Lecture, three hours; discussion, one hour. Preparation: two philosophy courses. Study of writings of one or more major modern philosophers (e.g., Russell, Moore, Wittgenstein, Carnap, Quine). May be repeated for credit with consent of instructor. P/NP or letter grading.

Special Studies

M187. Philosophical Analysis of Issues in Feminist Theory. (4) (Same as Women's Studies M110C.) Lecture, three hours. Requisite for Women's Studies majors: Women's Studies major, or permission of instructor. Preparation: 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 and liberation. Philosophical approach to feminist theories. May be repeated for credit with consent of instructor. Letter grading.

188. Advanced Honors Seminars. (1) Seminar, three hours. Limited to 20 students. Designed as adjunct to undergraduate lecture course. Exploration of topics in greater depth through supplemental readings, papers, and other activities and led by lecture course instructor. May be applied toward honors credit for eligible students. Honors content noted on transcript. P/NP or letter grading.

199C. Honors Research in Philosophy. (4) Tutorial, four hours. Limited to junior/senior philosophy honors program students. May 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 12- to 15-page paper representing original research. Courses 198A and 198B must be taken in conjunction with two different lecture courses, and may not be taken for multiple honors requirement. May be repeated for credit. Individual contract required. Letter grading.

Graduate Courses

200A-200B-200C. Seminar for First-Year Graduate Students. (4-4-4) Seminar, three hours. Limited to and required of all first-year graduate philosophy students. 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.

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.

220. Hobbes. (4) Lecture; three hours; discussion, one hour. Preparation: 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.

229. 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.

230. Spinoza. (4) Lecture; three hours. Selected topics in philosophy of Spinoza. May be concurrently scheduled with course C110, in which case there is two-hour biweekly discussion meeting, plus additional readings and longer term paper for graduate students. S/U or letter grading.

231. Leibniz. (4) Lecture; three hours. Selected topics in philosophy of Leibniz. May be concurrently scheduled with course C111, in which case there is two-hour biweekly discussion meeting, plus additional readings and longer term paper for graduate students. S/U or letter grading.

232. Locke and Berkeley. (4) Lecture, four hours. Preparation: one philosophy course. Study of philosophies of Locke and Berkeley, with emphasis on some cases on one or the other. Limited to 30 students when concurrently scheduled with course C112. S/U or letter grading.

234. Hume. (4) Lecture; four hours. Selected topics in philosophy of Hume. May be repeated for credit with consent of instructor. May be concurrently scheduled with course C114. S/U or letter grading.

250. Philosophy of Social Science. (4) Lecture, four hours. Examination of philosophical problems concerning concepts and methods used in social sciences. Topics may include: intermediate 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 interested in advanced preparation in social sciences encouraged to enroll. May be repeated for credit with consent of instructor. S/U or letter grading.

235. Seminar: Logic. (4) Seminar, four hours. May be repeated for credit with consent of instructor. S/U or letter grading.

236. Seminar: Intensional Logic. (4) Seminar, four hours. Topics may include logic of sense and denotation, modal logic, and intensional logics, epistemic logic, intensional logic of Principia Mathematica, possible worlds semantics. May be repeated for credit with consent of instructor. S/U or letter grading.

237. Seminar: 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.

238. 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. Requisites: course 150 or C156 or 157A 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.

242. 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. May be concurrently co-registered with course C151B. S/U or letter grading.

246. Seminar: Ethical Theory. (4) Seminar, four hours. Selected topics. Content varies from term to term. 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 C156. S/U or letter grading.

248. Problems in Moral Philosophy. (4) Seminar, four hours. Intensive study of some leading current problems in moral philosophy. May be repeated for credit with consent of instructor. S/U or letter grading.

253B. Topics in Ethical Theory: Metaethics. (4) Lecture, three hours; discussion, one hour. Requisites: course 22. Study and analysis of basic concepts, theories, and problems in metaethics. May be repeated for credit with consent of instructor. May be concurrently scheduled with course C153B. S/U or letter grading.

254A-254B. Legal Theory Workshop. (1 to 8 each) (Same as Law M555.) Seminar, three hours. Course M254A is enforced requisite to M254B. Students engage with work in progress 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. In Progress (M254A) and S/U or letter (254B) grading.

255. Seminar: Aesthetic Theory. (4) Seminar, four hours. Selected topics. May be repeated for credit with consent of instructor. S/U or letter grading.

256. Topics in Legal Philosophy. (4) (Same as Law M217.) 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.

257A-257B. Philosophy Legal Theory. (1 to 8 each) (Formerly numbered M257.) (Same as Law M554.) Seminar, two hours. Course M257A is enforced requisite to M257B. 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.

259. Philosophical Research in Ethics and Value Theory. (2 to 4) Seminar, two hours. Preparation: completion of proposition requirement. Presentation 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 4 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. Selected problems and philosophers which may be from different periods. 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; determinism and freedom; nature of explanations of intentional actions. May be repeated for credit with consent of instructor. S/U or letter grading.

280. 20th-Century Continental Philosophy. (4) Seminar, three hours. Selected topics 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.
PHYSICS AND ASTRONOMY
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Gary A. Williams, Ph.D.
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(David S. Saxon Presidential Professor of Physics)

Giovanni Zocchi, Ph.D.

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Chun-Wa Wong, Ph.D.
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Benjamin Zuckerman, Ph.D.

Associate Professors

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Steven R. Furlaneto, Ph.D.
Jean-Luc C. Margot, Ph.D.
Mayank R. Mehta, Ph.D.
Pietro Musumeci, Ph.D.
Alice E. Shapley, Ph.D.
Yaroslav Tserkovnyak, Ph.D.
Vladimir V. V. Vidal, Ph.D.

Assistant Professors

Michael F. Fitzgerald, Ph.D.
Eric R. Hudson, Ph.D.
Christoph Niemann, Ph.D.
Brian C. Regan, Ph.D.

Adjunct Professors

Elihu Abrahams, Ph.D.
William A. Barletta, Ph.D.

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 awesome 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 or 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 which 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 B.S. degree program in Astrophysics, the B.S. degree program in Biophysics, the B.S. degree program in Physics, and the B.A. 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 nontechnical 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 31A and 31B 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 6A, 6B, 6C form a one-year sequence of courses in basic physics for students in the biological and health sciences.

Physics 10 is a one-term, nonlaboratory course that surveys the whole field of physics. Any two or more courses from Physics 1A, 6A, and 10 are limited to 6 units credit.

Astrophysics B.S.

Preparation for the Major

Required: Physics 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 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 physics course.

Refer to the UCLA Transfer Admission Guide at http://www.admissions.ucla.edu/prospect/adm_tr.htm 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 B.S.

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 analytical 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, 18L; Chemistry and Biochemistry 20A, 20B, 30A, 30B; Life Sciences 2, 3 or 3H, 4; Mathematics 31A, 31B, 32A, 32B, 33A, 33B. Recommended: Life Sciences 1, Mathematics 33B, 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.

Refer to the UCLA Transfer Admission Guide at http://www.admissions.ucla.edu/prospect/adm_tr.htm for up-to-date information regarding transfer selection for admission.

The Major


Physics B.S.

The Physics B.S. major should be taken if students intend to continue toward the Ph.D. in Physics.

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 B.S. 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 at http://www.admissions.ucla.edu/prospect/adm_tr.htm 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 worked out by students in consultation with their designated departmental adviser, that details which courses they take to complete the degree. There are four overall requirements: (1) the plan must be worked out five terms before students expect to graduate; (2) the plan must include at least two courses from the Physics 180 series, which should be taken in the senior
year; (3) there must be three additional upper division courses in the plan, preferably selected from Physics 108, 114, 117, M122, 123, 124, 126, 132, 140A, 140B; (4) there must be written rationale for the plan. Except for the Physics 180 laboratories, the courses need not be in the Physics and Astronomy Department. However, it is expected that the courses fit into a coherent structure. It is important that the structure and rationale are thought out carefully, as the plan must be endorsed 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.

Physics B.A.

The Physics B.A. major is intended to provide 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 Ph.D. in Physics are advised to work for the B.S. in Physics as described earlier.

Preparation for the Major

Required: Physics 1A or 1AH, 1B or 1BH, 1C or 1CH, 1D, 1DL; 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 B.A. 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 at http://www.admissions.ucla.edu/prospect/ADM_TR.htm for up-to-date information regarding transfer selection for admission.

The Major


Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://www.gdnet.ucla.edu/gsasa/library/pgmrqintro.htm. 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 Physics and Astronomy offers the Master of Arts in Teaching (M.A.T.) degree in Astronomy, Master of Science (M.S.) and Doctor of Philosophy (Ph.D.) degrees in Astronomy, Master of Arts in Teaching (M.A.T.) degree in Physics, and Master of Science (M.S.) and Doctor of Philosophy (Ph.D.) degrees in Physics.

Astronomy

Lower Division Courses

3. Nature of Universe. (5) Lecture, three hours; discussion, two hours. Not open to students with credit for or currently enrolled in course 81 or 82. No special mathematical preparation required beyond that necessary for admission to UCLA in freshman standing. Course for general UCLA students, normally not intended to major in physical sciences, on development of ideas in astronomy and what has been learned of nature of universe, including recent discoveries and developments in fields related to astronomy. P/NP or letter grading.

4. Black Holes and Cosmic Catastrophes. (4) Lecture, three hours; discussion, one hour. Essentially nonmathematical course for general UCLA students that discusses black holes and related cosmic catastrophes. White dwarfs, neutron stars, and black holes are compact objects formed in violent events that terminate lives of stars and are associated with some of most energetic and explosive phenomena in astrophysics: planetary nebulae and novae (white dwarfs), supernovae, pulsars, galactic X-ray sources, and gamma-ray bursts. Supersmassive black holes form in nucleus of young galaxies, and gravitational accretion of matter onto black holes powers most energetic objects in universe — quasars. Universe was born in ultimate cosmic explosion — Big Bang — that may have derived its energy from quantum mechanical vacuum. P/NP or letter grading.

5. Life in Universe. (4) Lecture, four hours; discussion, one hour. Preparation: prior introduction to astronomy. Life on Earth and prospects for life elsewhere in context of evolution of universe from simple to complex. Course material primarily from astronomy and biology but includes some chemistry, geology, and physics. Selected topics treated in some depth, but with little or no formal mathematics. P/NP or letter grading.


7. Astronomy and Media. (4) Lecture, three hours; discussion, one hour; laboratory, one hour. Designed to help nonmajors develop skills to continually learn about science through media. Detailed study of research currently in media, including media effects, greenhouse effect, NASA, cosmology, and extraterrestrial life. Investigation of forces that influence science reporting. P/NP or letter grading.

81. Astrophysics I: Stars and Nebulae. (4) Lecture, three hours; discussion, one hour. Requisites: Mathematics 31A, 31B, and Physics 1A or 1AH. Open to qualified sophomores and upper division students. Survey of our knowledge about stars: their distances, masses, luminosities, temperatures, and interrelations between these parameters. Emphasis on astronomy and galactic stellar and interstellar mechanics. P/NP or letter grading.

82. Astrophysics II: Stellar Evolution, Galaxies, and Cosmology. (4) Lecture, three hours; discussion, one hour. Requisites: Mathematics 31A, 31B, and Physics 1A or 1AH. Recommended: course 81, Physics 1B and 1C (or 1BH and 1CH). Open to qualified sophomore and upper division students. Basic principles of stellar structure and evolution. Red giants, white dwarfs, novae, supernovae, neutron stars, and black holes. Pulsars and galactic X-ray sources. Milky Way galaxy and interstellar medium. Extragalactic astrophysics, galaxy clusters, active galactic nuclei, and quasars. Introduction to cosmology; Hubble law, thermal history of Big Bang, and earliest moments of universe.

88A-88Z. Lower Division Seminars. (2 each) Seminar, two hours. Limited to freshmen. Variable topics; consult Schedule of Classes for topics to be offered in specific term. P/NP or letter grading.

88A. Cosmic Evolution. (2) Seminar, two hours. Limited to freshmen. Variable topics; consult Schedule of Classes for topics to be offered in specific term. P/NP or letter grading.

115. Statistical Mechanics and Its Application to Astrophysics. (4) Lecture, three hours; discussion, one hour. Requisites: Mathematics 32B, 33A, 33B, Physics 1A, 1B, and 1C (or 1AH, 1BH, and 1CH). Particle distributions, partition functions, black body radiation, Saha equation, degeneracy. Applications to stellar atmosphere, stellar interiors, and interstellar medium. 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 random processes, and numerical methods. Laboratory experiments involve radio astronomy, interferometry, narrowband solar imaging, and visual photometry. Emphasis on use of computers for astronomical data processing and for solving two-dimensional astronomical images. P/NP or letter grading.

190. Research Colloquia in Astrophysics. (2) Seminar, two hours. Designed for and limited to 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.

194. Research Group Seminars: Astrophysics. (1) Research group meeting, one hour. Designed for undergraduate students who are part of research group/ laboratory. Discussion of research of faculty members or students with regular attendance. 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 and 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. 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. Independent post-graduate 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. 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


274. Galaxies. (4) Lecture, three hours. Galaxy properties: kinematics, mass, morphology, stellar populations; stellar evolution and spiral structure; galaxy formation; galaxy clusters, collisions, and mergers; observations and theory of quasars and active galactic nuclei. Letter grading.


277A-277B. Astronomy Research Project. (6-6) Tutorial, to be arranged. Designed for second-year graduate astronomy students. Two-term research project planned in conjunction with faculty advisor on any in- terestable 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 course with lecture/seminar format, focusing on one of set of specific topics in astronomy. S/U (2-unit course) or letter (4-unit course) grading.


280. 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, radiation transitions, complex atoms, molecular spectroscopy including electronic, vibrational, and rotational transition, nuclear reaction theory. Letter grading.


283. Numerical and Statistical Methods. (4) Lecture, three hours. Topics selected by instructor in mathematical, numerical, 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. Practice in real-time problem solving covering all fields of astrophysics. Topics selected by instructor. Students selected individually to solve problems on blackboard using basic physics and order/demonstration and statistical, and ionization equilibrium. Letter grading.

285. Origin and Evolution of Solar System. (4) (Same as Earth and Space Sciences M285.) Lecture, four hours. Dynamics of solar system; chemical origins, 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.

296. Research Topics in Astronomy. (2) Discussion, two hours. Advanced study and analysis of current topics in astronomy. Discussion of current research and literature in research specialty of faculty member teaching course. May be repeated for credit. S/U grading.

297. Research Tutorial: Astrophysics Physics. (2 or 4) (Same as Physics M297.) 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.

275. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Internship at educational television program or university or college 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.

596A. Directed Individual Studies. (4 to 10) Tutorial, to be arranged. May be repeated at discretion of department. S/U grading.

596L. Advanced Study and Research at Lick Observatory. (4 to 12) Tutorial, to be arranged. Designed for 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. Ph.D. Research and Writing. (10 to 12) Tutorial, to be arranged. May be repeated at discretion of department. S/U grading.

Physics

Lower Division Courses

1A. Physics for Scientists and Engineers: Mechanics. (5) Lecture, four hours; discussion, one hour. Recommended preparation: high school physics, one year of high school calculus or Mathematics 31A and 31B. Enforced requisite: Mathematics 31A. Enforced corequisite: Mathematics 32A. Recommended corequisite: Mathematics 32A. Motion, Newton's laws, work, energy, linear and angular momentum, rotation, equilibrium, gravitation. P/NP or letter grading.

1AH. Physics for Scientists and Engineers: Mechanics (Honors). (5) Lecture/demonstration, four hours; discussion, one hour. Enforced requisite: Mathematics 31A. Enforced corequisite: Mathematics 31B. Recommended corequisite: Mathematics 32A. 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.


1BH. Physics for Scientists and Engineers: Oscillations, Waves, Electric and Magnetic Fields (Honors). (5) Lecture/demonstration, four hours; discussion, one hour. Enforced requisites: courses 1A, 1B, Mathematics 31B. Enforced corequisite: Mathematics 32B. Recommended corequisite: Mathematics 32B. Enriched preparation for upper division physics courses. Same material as course 1B but in greater depth; recommended for Physics majors and other students desiring such coverage. P/NP or letter grading.


1CH. Physics for Scientists and Engineers: Electrodynamics, Optics, and Special Relativity (Honors). (5) Lecture/demonstration, four hours; discussion, one hour. Enforced requisites: courses 1A or 1B, 18B or 1B, Mathematics 32A. Enforced corequisite: Mathematics 32B. Recommended corequisite: Mathematics 33A. Enriched preparation for upper division physics courses. Same material as course 1CH but in greater depth; recommended for Physics majors and other students desiring such coverage. P/NP or letter grading.

1Q. Contemporary Physics. (2) Review of current problems in physics, with emphasis on those being studied at UCLA. Significance of the problems and their historical context. P/NP grading.
4AL. Physics Laboratory for Scientists and Engineers: Mechanics. (2) Laboratory, three hours. Enforced requisites: courses 1A or 1AH, 1B, and 2B. Enforced corequisite: course 1B or 1AH. Experiments on measuring gravity, accelerated motion, kinetic and potential energy, impulse and momentum, damped and driven oscillators, resonance and vibrating strings. Computer data acquisition and analysis. Introduction to error analysis, including distributions and least-squares fitting procedures. Letter grading.

4BL. Physics Laboratory for Scientists and Engineers: Electricity and Magnetism. (2) Laboratory, three hours. Enforced requisites: courses 1A or 1AH, 1B, and 1CH. Enforced corequisite: course 1C or 1CH. Experiments on electric fields, forces, and potentials. Magnetic fields, lines of force and nonlinear devices. Resistors, capacitors, and inductors. Modern circuits. Geometrical and physical optics. Letter grading.

5A. Physics for Life Sciences Majors: Mechanics. (5) Lecture, three hours; discussion, one hour; laboratory, two hours. Enforced requisites: Mathematics 3A, 3B, 3C. Enforced corequisite: Mathematics 3C. Not open for credit to students with credit for course 6AH. Motion, Newton laws, energy, linear and angular momentum, rotation, equilibrium, gravity, biological applications. P/NP or letter grading.

5AH. Physics for Life Sciences Majors: Statics and Dynamics of Living Systems. (5) Lecture, three hours; discussion, one hour; laboratory, two hours. Enforced requisites: Mathematics 3A, 3B, 3C. Enforced corequisite: Mathematics 3C. Not open for credit to students with credit for course 6AH. Tissues, cells, and tissues of whole organisms. Applications to biology and bio-chemical systems. Systems of states of matter (solids, liquids, and gases) and of surfaces and interfaces as they apply to biological organisms. P/NP or letter grading.

6B. Physics for Life Sciences Majors: Waves, Electromagnetism, and Magnetism. (5) Lecture, three hours; discussion, one hour; laboratory, two hours. Enforced requisites: courses 1A, 1B, and 1C, or 1AH, 1B, and 1CH. Not open for credit to students with credit for course 6BH. Mechanical waves, sound, electricity and magnetism, electromagnetic waves, biomolecular applications. P/NP or letter grading.

6BH. Physics for Life Sciences Majors: Sound, Light, and Hydrodynamics (Honors). (5) Lecture, three hours; discussion, one hour; laboratory, two hours. Enforced requisites: courses 1A, 1B, and 1C, or 1AH, 1B, and 1CH. Sound and electromagnetic waves, interference, diffraction, radioactivity, and hydrodynamics, with applications to biological and biochemical systems. P/NP or letter grading.

6C. Physics for Life Sciences Majors: Light, Fluids, Thermodynamics, Modern Physics. (5) Lecture, three hours; discussion, one hour; laboratory, two hours. Not open for credit to students with credit for course 6CH. Geometrical and physical optics, fluid statics and dynamics, thermodynamics. Selected topics from foundations of quantum mechanics; atoms, nuclei, and particle physics; relativity; medical detectors; biological applications. P/NP or letter grading.

6CH. Physics for Life Sciences Majors: Electricity, Magnetism, and Transport (Honors). (5) Lecture, three hours; discussion, one hour; laboratory, two hours. Not open for credit to students with credit for course 6CH. Electromagnetism and transport phenomena. Electric circuits, with applications to electrophysiology. Magnetism, especially NMR. Diffusion and heat flow, with applications to bio- logical and biochemical systems. P/NP or letter grading.

10. Physics. (4) Lecture, three hours; discussion, one hour. Not open for credit to students with credit for course 1A, 1AH, 6A, or 6AH. Special mathematical preparation beyond that necessary for admission to University of California, Berkeley. Special topics in modern physics. Emphasis on applications to current research. Consult Schedule of Classes for topics to be offered in a specific term. P/NP or letter grading.

10A. Analytic Mechanics. (4) Lecture, three hours; discussion, one hour. Requisites: courses 1A, 1B, and 1C (or 1AH, 1B, and 1CH), Mathematics 32B, 33A. Corequisite: Mathematics 33B. Newtonian mechanics and conservation laws. Work-energy theorem; Center-of mass; Motion in central force fields; Damped oscillations; diffusion, nonlinear oscillations; P/NP or letter grading.

10B. Analytic Mechanics. (4) Lecture, three hours; discussion, one hour. Requisites: courses 1A, 1B, and 1C (or 1AH, 1B, and 1CH), 105A. Relevance with vector equations; non-linear systems, chaos and chaotic attractors. P/NP or letter grading.

10B. Analytic Mechanics. (4) Lecture, three hours; discussion, one hour. Requisites: courses 1A, 1B, and 1C (or 1AH, 1B, and 1CH), 105A. Relevance with vector equations; non-linear systems, chaos and chaotic attractors. P/NP or letter grading.

10B. Analytic Mechanics. (4) Lecture, three hours; discussion, one hour. Requisites: courses 1A, 1B, and 1C (or 1AH, 1B, and 1CH). Stability of motion. P/NP or letter grading.

10B. Analytic Mechanics. (4) Lecture, three hours; discussion, one hour. Requisites: courses 1A, 1B, and 1C (or 1AH, 1B, and 1CH). Stability of motion. P/NP or letter grading.

10B. Analytic Mechanics. (4) Lecture, three hours; discussion, one hour. Requisites: courses 1A, 1B, and 1C (or 1AH, 1B, and 1CH). Stability of motion. P/NP or letter grading.

10B. Analytic Mechanics. (4) Lecture, three hours; discussion, one hour. Requisites: courses 1A, 1B, and 1C (or 1AH, 1B, and 1CH). Stability of motion. P/NP or letter grading.

10B. Analytic Mechanics. (4) Lecture, three hours; discussion, one hour. Requisites: courses 1A, 1B, and 1C (or 1AH, 1B, and 1CH). Stability of motion. P/NP or letter grading.

10B. Analytic Mechanics. (4) Lecture, three hours; discussion, one hour. Requisites: courses 1A, 1B, and 1C (or 1AH, 1B, and 1CH). Stability of motion. P/NP or letter grading.

10B. Analytic Mechanics. (4) Lecture, three hours; discussion, one hour. Requisites: courses 1A, 1B, and 1C (or 1AH, 1B, and 1CH). Stability of motion. P/NP or letter grading.

10B. Analytic Mechanics. (4) Lecture, three hours; discussion, one hour. Requisites: courses 1A, 1B, and 1C (or 1AH, 1B, and 1CH). Stability of motion. P/NP or letter grading.

10B. Analytic Mechanics. (4) Lecture, three hours; discussion, one hour. Requisites: courses 1A, 1B, and 1C (or 1AH, 1B, and 1CH). Stability of motion. P/NP or letter grading.

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10B. Analytic Mechanics. (4) Lecture, three hours; discussion, one hour. Requisites: courses 1A, 1B, and 1C (or 1AH, 1B, and 1CH). Stability of motion. P/NP or letter grading.

10B. Analytic Mechanics. (4) Lecture, three hours; discussion, one hour. Requisites: courses 1A, 1B, and 1C (or 1AH, 1B, and 1CH). Stability of motion. P/NP or letter grading.

10B. Analytic Mechanics. (4) Lecture, three hours; discussion, one hour. Requisites: courses 1A, 1B, and 1C (or 1AH, 1B, and 1CH). Stability of motion. P/NP or letter grading.
of sound using radio-frequency pulsed ultrasound, sound-following sensors, cosmic ray detector. P/NP or letter grading.

M122. Introduction to Plasma Electronics. (4) (Same as Electrical Engineering M185.) Lecture, three hours. Requisite: course 110A or Electrical Engineering 101. Senior-level introductory course on electrodynamics of plasmas and applications to materials processing, generation of coherent radiation, particle beams, and renewable energy sources. Letter grading.

123. Atomic Structure. (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. Theory of atomic structure. Interaction of radiation with matter. P/NP or 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 structure, nuclear decays, and nuclear reactions. P/NP or letter grading.

126. Elementary Particle Physics. (4) Lecture, three hours; discussion, three hours. Requisites: courses 1A, 1B, and 1C (or 1AH, 1BH, and 1CH), Mathematics 32B, 33A, 33B. Corequisite: course 115C. Introduction to physics of elementary particles. The four basic interactions: electromagnetic, weak, strong, and gravitational. Properties of baryons, mesons, quarks, and leptons; conservation laws, symmetries and broken symmetries; the Standard Model; experimental techniques; new physics at the new accelerators. P/NP or letter grading.


128. Cosmology and Particle Astrophysics. (4) Lecture, three hours; discussion, one hour. Requisites: courses 1A, 1B, and 1C (or 1AH, 1BH, and 1CH), Mathematics 32B, 33A, 33B. Vectors and fields in space, linear transformations, matrices, and operators; Fourier series and integrals. P/NP or letter grading.

132. Mathematical Methods of Physics. (4) Lecture, three hours; discussion, one hour. Requisites: courses 1A, 1B, and 1C (or 1AH, 1BH, and 1CH), Mathematics 32B, 33A, 33B. Functions of a complex variable, including Riemann surfaces, analytic functions, Cauchy theorem and formula, Taylor and Laurent series, calculus of residues, and Laplace transforms. P/NP or letter grading.

140A. Introduction to Solid-State Physics. (4) Lecture, three hours; discussion, one hour. Enforced requisitise: course 112. Introduction to basic theoretical concepts of solid-state physics with applications. Crystal symmetry; cohesive energy; diffusion of electron, neutron, and electromagnetic waves in a lattice; reciprocal lattice; phonons and their interactions; free electron theory of metals; energy bands. Letter grading.


150. Physics of Charged-Particle and Laser Beams. (4) Lecture, three hours; discussion, one hour. Requisites: courses 1A, 1B, and 1C (or 1AH, 1BH, and 1CH), 110A, 110B, 115A, 115B. Physics of charged-particle and laser beams presented as a unified subject. Basic physics of charged-particle beams, covering relativistic particle motion in electromagnetic fields, transverse focusing, acceleration mechanisms, linear and circular accelerators, and advanced topics. Some fundamentals of laser physics, including gain and broadening mechanisms, linear light optics, laser reso- nators, and advanced topics and applications. P/NP or letter grading.

1515. Energy in Modern Economy. (4) (Same as Environment M155.) Lecture, three hours. Requisites: courses 1A and 1B (or 6A and 6B), Mathematics 3A and 3B (or 31A and 31B), Statistics 12 or 13. Examination of physics of energy, history of energy development, and role that energy plays in our economy, particularly in transportation and power grid. Prospects for decreasing availability of fossil fuels and impact of global warming on energy development. Current and potential future government and social responses to energy issues. P/NP or letter grading.

160. Numerical Analysis Techniques and Particle Simulations. (4) Lecture, three hours; computer terminals, six hours. Preparation: minimum knowledge of computer programming (Fortran). Requisites: courses 1A, 1B, and 1C (or 1AH, 1BH, and 1CH), 105A, 105B, 110A, 110B. Introduction to field of computer modeling of physical systems using particle models; numerical models and methods, methods of diagnosing results, experience with running interesting physical problems. P/NP or letter grading.

180A. Nuclear Physics Laboratory. (4) Laboratory, four hours. P/NP or letter grading.

180B. Physical Optics and Spectroscopy 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.

180G. Soft Matter Laboratory. (4) (Same as Chemistry M120.) Laboratory, four hours. P/NP or letter grading.


186. Neuropsychology: Brain-Mind Problem. (4) Lecture, three hours; discussion, one hour. Requisites: courses 1A, 1B, 1C, 4AL, 6A, 6B, 6C, Chemistry 14A or 20A, Mathematics 3A, 3B, 3C, 31A, 32A, 32B, 33A. How does mind emerge from brain? Provides summary of basic biophysics of neurons, synapses, and plasticity. Introduces to commonly used experimental and theoretical techniques of measuring, quantifying, and understanding the relative strengths and weaknes and use of them to understand basic neural mechanisms, their emergent neural dynamics, and behavior in example model systems. Discussion of how neural interactions 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. P/NP or letter grading.


188. Special Courses in Physics. (4) Lecture, three hours; discussion, one hour. Limited to junior/senior Astrophysics and Physics majors. Departmentally sponsored temporary courses such as pilot courses or those taught by visiting faculty members. May be repeated for credit. 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 temporary laboratory courses such as pilot courses or those taught by visiting faculty members. May be repeated for credit. P/NP or letter grading.

190. Research Colloquia in Physics. (2) Seminar, two hours. Designed to bring together students under- taking supervised tutorial research in seminar setting with c. P/NP or more faculty members to discuss their own work or related work in discipline. Led by one supervis- ing faculty member. May be repeated for credit. P/NP grading.

191. Variable Topics Research Seminars: Physics and Astronomy. (4) Lecture or seminar, one hour. Limited to undergraduate students. Seminars are linked to speaker-series seminars offered by department on weekly basis. Supplemental reading from literature on speaker’s topic, as well as active partic- ipation and discussion to understand what kind of questions modern-day physicists actually ask and how they go about answering them. May be repeated for credit. P/NP or letter grading.

194. Research Group Seminars: Physics and Astronomy. (1) Research group meeting, one hour. Designed for undergraduate students who are part of research group/laboratory. Discussion of research of fac- ulty members or students with regard to understanding methodology in field and laboratory equipment. May be repeated for credit. P/NP grading.

196. Research Apprenticeship in Physics. (2 to 4) Tutorial, three hours per week. Limited to juniors/seniors with overall 3.0 grade-point average. En- try-level research apprenticeship for upper division stu- dents under guidance of faculty mentor. May be repeated for credit. Individual contract required. P/NP grading.

197. Individual Studies in Physics. (2 to 4) Tutorial, to be arranged. Limited to juniors/seniors. Individual in- tensive study, with scheduled meetings to be arranged between faculty mentor and student. Assigned read- ing and tangible evidence of mastery of subject matter required. May be repeated for credit. Individual contract required. P/NP grading.

198. Honors Research in Physics. (2 to 4) Tutorial, 12 hours. Limited to juniors/seniors with overall 3.0 grade-point average. Development and completion of honors thesis or comprehensive research project un- der direct supervision of faculty mentor. May be repeated for credit. Individual contract required. Letter grading.

199. Directed Research or Senior Project in Phys- ics. (2 to 4) Tutorial, two hours. Limited to juniors/seniors with overall 3.0 grade-point average. En- try-level research apprenticeship for upper division stu- dents under guidance of faculty mentor. May be repeated for credit. Individual contract required. Letter grading.

Graduate Courses

201G. Modern Physics Research Areas. (2) Review of modern physics research areas, with emphasis on those actively pursued at UCLA. S/U grading.


213B. Advanced Atomic Structure. (4) N-j symbols; continuous groups, fractional parentage coefficients, n electronic systems.


215C. Quantum Statistical Mechanics and the Many Body System. (4) Lecture, three hours. Classical methods for interacting systems; quantum field theory techniques in statistical mechanics; Green’s func- tion approach; Coulomb gas; imperfect Bose gas; electro- phonon interaction; superconductivity; phase transitions; theory of Fermi liquid. S/U or letter grading.


226E. Particle Astrophysics: Exploring Earliest and Extreme Universe. (4) Lecture, three and one half hours. Requisites: courses 210A, 210B, 211A, 215A. Topics include inflationary cosmology; introduction to high-energy astrophysics and discussion of latest de- v elopments in both experimentation and theory. Spe- cial emphasis on unified picture of universe that emerges from particle, astronomy, and cos- mology. S/U or letter grading.

230A-230B-230C. Quantum Field Theory. (6-6-6) Lecture, four hours. Requisites: courses 221A, 221B, 221C. Modern quantum field theory, including free and interacting field quantization, operator and path inte- gral formalism, renormalization theory and renormal- ization group methods, gauge theories, quantum elec- trodynamics, perturbative quantum field theory, sponta- neous symmetry breakdown, mass generation, and anomalies. S/U or letter grading.

230D. Quantum Field Theory. (4) Lecture, four hours. Requisites: courses 221A, 221B, 221C. Topics in modern quantum field theory, including solitons, in- stantons, and other topological defects, large N meth- ods, finite temperature field theory, lattice field theory, effective field theory methods and chiral Lagrangians, conformal field theories and topological aspects of anomalies. S/U or letter grading.

231A. Methods of Mathematical Physics. (4) Lecture, four hours, not open for credit to students with credit for Mathematics 226B. Ordinary differential equations, partial differential equations, and integral equations. Calculus of variations. S/U or letter grading.


232A-232B. Relativity. (4-4) Special and general the- ories, with application to elementary particles and as- trophysics. S/U or letter grading.

232C. Special Topics in General Relativity. (4) Lec- ture, four hours. S/U or letter grading.


236. Geometry and Physics. (4) (Same as Mathe- matics M217.) Lecture, three hours. Interdisciplinary course on topics at interface between physics quantum fields and supersymmetries and mathematics of differential and algebraic geometry. Topics include supersymme- try, supergravity, Witten’s Chern-Simons term and conformal field theory, Calabi-Yau manifolds, mirror symmetry and duality, integrable systems. S/U grading.


237B. String Theory. (4) Lecture, four hours. Requi- site: course 237A. Topics include toroidal com- pactification, t-duality and d-branes, supersymmetric string theories, orbifolds, Calabi-Yau compactifications and physics in four dimensions, and strings at strong cou- pling and dualities. S/U or letter grading.


256. Seminar: Propagation of Waves in Fluids. (2 to 4) Seminar, three hours. S/U or letter grading.

258. Seminar: Spectroscopy. (2 to 4) Seminar, three hours. S/U or letter grading.

279A. Seminar: Nuclear Physics. (2 to 4) Seminar, three hours. S/U or letter grading.

279B. Seminar: Elementary Particle Physics. (2 to 4) Seminar, three hours. S/U grading.

279C. Seminar: Accelerator Physics. (2 to 4) Semi- nar, three hours. Physics principles governing design and performance analysis of particle accelerators, us- ing existing accelerators as examples and emphasizing the interplay among design goals, performance, and operational experience. S/U grading.
280E. Advanced Plasma Laboratory. (4) Lecture, two hours; laboratory, four hours. Requisites: courses M122, 188B. Laboratory experiments on behavior of plasmas in magnetic fields. Study of basic physics of particle motions, distribution functions, and fluid dynamics. Plasma waves and nonlinear phenomena. Advanced plasma diagnostics.


290. Research Tutorial: Plasma Physics. (2 or 4) Three terms required of each graduate student doing research in this field, ordinarily during second or third year. Seminar and discussion by staff and students directed toward problems of current research interest in plasma physics group, both experimental and theoretical. May be repeated for credit. S/U grading.

291. Research Tutorial: Elementary Particle Theory. (2 or 4) Requisites: courses 226A, 230A, 230B. Required of each graduate student doing research in this field, ordinarily during second or third year. Seminar and discussion by staff, postdoctoral fellows, and graduate students. May be repeated for credit. S/U grading.

292. Research Tutorial: Spectroscopy, Low-Temperature, and Solid-State Physics. (2 or 4) Required of each graduate student doing research in these fields, ordinarily during second or third year. Seminar and discussion by staff and students on problems of current research interest in spectroscopy, low-temperature, and solid-state physics. May be repeated for credit. S/U grading.

293. Research Tutorial: Current Topics in Physics. (2) Lecture, one hour. Seminar and discussion by staff and students on current topics in physics, both experimental and theoretical (topics not limited to one field of physics). Strongly recommended for graduate students in physics. May be repeated for credit. S/U grading.

294. Research Tutorial: Accelerator Physics. (2 or 4) Lecture, 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 accelerator physics. May be repeated for credit. S/U grading.

295. Research Tutorial: Solid Earth Physics. (2 or 4) Required (or course 292 if appropriate) of each graduate student doing research in this field, ordinarily in second or third year. Seminar and discussion on solid earth physics. May be repeated for credit. S/U grading.

296. Research Topics in Physics. (2) Advanced study and analysis of current topics in physics. Discussion of current research and literature in research specialties of faculty member teaching course. May be repeated for credit. S/U grading.

M297. Research Tutorial: Astroparticle Physics. (2 or 4) (Same as Astronomy M297.) Lecture, 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 astroparticle physics. May be repeated for credit. S/U grading.

298. Research Tutorial: Experimental Elementary Particle Physics. (2 or 4) Limited to six students. Required of each graduate student doing research in this field, ordinarily during second or third year. Seminar and discussion by staff and students on current problems in experimental elementary particle physics. May be repeated for credit. S/U grading.

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 experimental and theoretical. May be repeated for credit. S/U grading.

M370A. Integrated Science Instruction Methods. (4) (Same as Chemistry M370A and Earth and Space Sciences M370A.) Lecture, two hours; discussion, one hour; laboratory, one hour. Preparation of 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 and Space Sciences M370B.) Lecture, two hours; discussion, one hour; laboratory, one hour. Requisite: course M370A or Chemistry M370A or Earth 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 and 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/discussion (five or more one-hour meetings during term, plus intensive training week at beginning of Fall Quarter). Required of all new teaching assistants. Special course for teaching assistants designed to deal with problems and techniques of teaching college physics. Ideas and techniques learned are applied and 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 Ph.D. Qualifying Examinations. (4) Tutorial, to be arranged. May be repeated twice for credit. S/U grading.

598. Master’s Thesis Research and Writing. (4) Tutorial, to be arranged. May be repeated twice for credit. S/U or letter grading.

599. Ph.D. Research and Writing. (4 to 12) Tutorial, to be arranged. May be repeated for maximum of 18 units. S/U grading.

PHYSIOLOGICAL SCIENCE
See Integrative Biology and Physiology

PHYSIOLOGY
David Geffen School of Medicine

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Chairs
Kenneth D. Philipson, Ph.D., Chair
Thomas J. O’Dell, Ph.D., Executive Vice Chair
Nancy L. Wayne, Ph.D., Vice Chair, Instruction

Scope and Objectives
Physiology is the science of the functional activities of the human body. This covers a wide range of domains, 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.

In the last survey conducted by the National Academies Board on Higher Education and Workplace, UCLA’s Physiology Department was judged second best in the nation in terms of the quality of its faculty. The department offers postdoctoral training in research and welcomes students interested in articulated M.D./Ph.D. programs.

Applicants interested in pursuing graduate study may apply directly to the interdepartmental Molecular, Cellular, and Integrative Physiology Ph.D. Program. See http://www.mcp.ucla.edu or UCLA ACCESS to Programs in Molecular, Cellular, and Integrative Life Sciences at http://www.uclaaccess.ucla.edu.

Physiology
Upper Division Courses

100. Elements of Human Physiology. (6) Designed for first-year dental students. Major organic body functions. With special supplementation, a suitable introduction to the field for graduate students for whom the 201A, 201B course sequence is too extensive.

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. (5) (Same as Neuroscience M210 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 clamp techniques, with circuit analysis and noise

Chair
Nancy L. Wayne, Ph.D.

Academies Board on Higher Education and Workplace.
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 conduc-
tance and single channel properties discussed in ana-
tytical detail using original publications.

M223. Membrane Molecular Biology. (4) (Same as Biological Chemistry M223.) Lecture, two hours; dis-
cussion, two hours. Requisite: Biological Chemistry CM253. Advanced course in molecular aspects of membrane physiology and biochemistry covering lipids and physical chemistry of biological membranes; membrane biogenesis and targeting of proteins to membranes; pumps, carriers, and channels; receptors and transmembrane signaling. S/U or letter grading.

298. Current Topics in Physiology. (2 to 4) Lecture, one hour; discussion, one hour. Designed for graduate students. Students read primary literature in a speci-
ified 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 M.S. Comprehensive Exami-
nation or Ph.D. Qualifying Examinations. (2 to 12) Tutorial, to be arranged. S/U grading.


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**Political Science**

**College of Letters and Science**

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Edmond Keller, Ph.D., Chair

Professors

Joel D. Aberbach, Ph.D.
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Joshua F. Dienstag, Ph.D.
Barbara Geddes, Ph.D.
Franklin D. Gilliam, Jr., Ph.D.
Miriam A. Golden, Ph.D.
Timothy J. Groseclose, Ph.D. (Marvin Hoffenberg Professor of American Politics and Public Policy)

Edmond Keller, Ph.D.
Deborah W. Larson, Ph.D.
Michael F. Lofchine, Ph.D.
Susanne Lothmann, Ph.D.
Barbara J. Nelson, Ph.D.
Barry O'Neil, Ph.D.
Gary A. Orfield, Ph.D.
Karen J. Orren, Ph.D.
Anthony R. Pagden, Ph.D.
Mark A. Peterson, Ph.D.
Ronald L. Rogowski, Ph.D.
Michael L. Ross, Ph.D.
Thomas Schwartz, Ph.D.
David O. Sears, Ph.D.
Giulia Sissa, Ph.D.
Steven L. Spiegel, Ph.D.
Arthur A. Stein, Ph.D.
James Tong, Ph.D.
Marc Trachtenberg, Ph.D.
Daniel S. Treisman, Ph.D.

David O. Wilkinson, Ph.D.
John R. Zaller, Ph.D.

Professors Emeriti

Richard D. Baum, Ph.D.
Mattei Dogan, Docteur ès Lettres
Leonard Freedman, Ph.D.
Robert S. Gerstein, Ph.D.
Edward Gonzalez, Ph.D.
Marvin Hoffenberg, M.A.
Roman Kolkowicz, Ph.D.
Andrzej Korbonski, Ph.D.
Charles R. Nixon, Ph.D.
Carole Pateman, O.Ph.
David C. Rapoport, Ph.D.
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Associate Professors

Richard D. Anderson, Jr., Ph.D.
Kathleen Bawn, Ph.D.
Michael S.Y. Chwe, Ph.D.
Scott C. James, Ph.D.
Jeffrey B. Lewis, Ph.D.
Kirstie M. McClure, Ph.D.
Raymond A. Rocco, Ph.D.
Andrew Salk, Ph.D.
Mark G. Sawyer, Ph.D.
Michael F. Thies, Ph.D.
Lynn Vyvreck-Lewis, Ph.D.
Brian D. Walker, Ph.D.

Assistant Professors

Lorrie A. Frasure, Ph.D.
Leslie N. Johns, Ph.D.
Robert Trager, Ph.D.

Adjunct Assistant Professor

James A. Desseaux, Ph.D.

Scope and Objectives

The undergraduate major in Political Science aims to provide 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 changing 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 fo-
cused to serve the needs of the liberal arts ma-

or in Political Science (a master's degree

Requirements. It is designed to give stu-
dents a strong foundation in the discipline while enabling them to acquire additional skills for advanc-
ing their professional careers.

Undergraduate Study

**Political Science B.A.**

**Political Science Premajor**

All students intending to major in Political Sci-
ence must enroll as Political Science prema-
jors. After completion of preparation for the ma-

or courses, they need to petition to enter the major in the Undergraduate Office, 4269A/ 4269B Bunche Hall.

**Preparation for the Major**

**Required:** Four lower division courses from Po-

tical Science 10, 20, 30, 40, 50. These lower division courses is requisites to upper division courses are required in those fields design-

ated as the concentration or distribution field. Students must also take Political Science 6 or 6R. Students who concentrate in Fields I, II, III, or IV may substitute Statistics 10 or 12 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 ma-

or with 90 or more units must complete the fol-

dowing introductory courses prior to admission to UCLA: one statistics course and four courses from political theory, world politics, game the-

ory, American politics, or comparative politics.

Refer to the UCLA Transfer Admission Guide at http://www.admissions.ucla.edu/prospect/ adm_tr.htm for up-to-date information regarding transfer selection for admission.

**The Major**

**Required:** Ten upper division courses (40 units) selected from Political Science 104A through 199, 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 or-

ganized into five fields: (I) political theory, (II) in-

ternational relations, (III) American politics, (IV) comparative politics, and (V) methods and models.

In fulfilling the requirement of 10 upper division political science courses, students must satisfy the following:

1. A concentration in one field by completing the lower division course and at least four upper division courses in that field

2. A distribution of the lower division course and two upper division courses in each of two other fields (four upper division courses)

3. Two additional elective courses in political science to comprise the total of 10

**Field Concentration Requirements**

The lower division course is requisite to upper division courses in those fields designated as the concentration field and the two distribution fields for majors. Specific requirements for the field concentration are as follows:

1. **Political Theory**: Political Science 10 and any four courses in Field I

2. **International Relations**: Course 20 and any four courses in Field II. Courses 118 and 151C may also be applied toward concentra-
tion or distribution in Field II
Ill. American Politics: Course 40 and any four courses in Field III. Courses 114A through M114D, M115A, 120A, and 121A may also be applied toward concentration or distribution in Field III

IV. Comparative Politics: Course 50 and any four courses in Field IV. Courses 118, 124C, 128A, 128B, 131, 132A, M132B, and 135 may also be applied toward concentration or distribution in Field IV

V. Methods and Models: Courses 6 or 6R (Statistics 10 and related courses may not be substituted), 30, and any four courses from 104A, 104B, M105, M106, 124A, M142D, 149 (collective action; congress, institutions, and collective choice; legislative strategy), 153B, 156D, 166, 169 (political economy of development), 170A, 191B (international negotiation)

Courses 119, 139, 149, 169, and 179 may be applied no more than twice toward the field concentration requirement. No more than three of these courses may be applied toward the major.

Courses 191H, 198, and 199 may not be applied toward either the concentration or distribution requirement.

Political Science majors should be aware that the upper division course requirements in the major (40 units) do not meet the upper division requirement of 60 units for graduation. Additional upper division units must be taken to reach the 60-unit total.

Undergraduate Seminars
Each term the department offers a series of seminars (Political Science 191A through 191E) in each field. The requisites are two upper division courses in the field in which the seminar is offered, a 3.25 average at the upper division level in political science, or discretion of the instructor. These courses may be applied toward either the concentration or distribution requirement, and students who qualify are encouraged to take them.

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 and take at least one seminar course in the Political Science 191 series before they enter the honors program or course 191H.

Students wishing to qualify for graduation with departmental honors must complete the following: (1) courses 191H and 198, in which a senior thesis is written; (2) eight upper division courses (excluding courses 119, 139, 149, 169, and 179) distributed as follows: four courses in one field and four additional courses, two in each of two other fields; (3) four upper division courses in one or two of the social sciences other than political science.

International Relations Specialization
The undergraduate specialization in International Relations can only be taken jointly with a major in Political Science, and all requirements for the Political Science major must be met by or in addition to meeting the requirements of this program. Students completing the program receive a degree with a major in Political Science and specialization in International Relations. The program is designed to serve the needs of (1) students desiring a general education focused on international affairs and (2) students preparing for graduate work in international affairs, whether in a social science or area study.

The program is also beneficial for (1) students planning careers (in business, law, journalism, or library service) with an international emphasis and (2) those preparing to teach social sciences in the secondary schools. These students should structure their programs primarily to meet the preparation requirements of the professional school or institutional credential of their choice.

Courses in management and administration, and in oral and written communications, ordinarily increase the career options of students in this program.

Preparation for the Specialization
Required: Political Science 26, 50, and two courses from 10, 30, 40; Anthropology 9, Economics 1 and 2, 5, or 100; Geography 3 or 5; History 1A, 1B, and 1C, or any three courses from 8A, 8B, 8C, 9A, 9C, 9D, M10A, 10B, 11A, 11B; Sociology 1.

Upper Division Requirements
The Political Science major should be completed as follows: any four upper division political science courses in each of Fields II and IV and two additional courses both in Field I or III.

Other required social sciences courses include one course from Anthropology 161, 167, 171, 173Q, 174P, 175R, 175T, 175U, 177, Sociology 179, 182, 183, 186; two courses from Economics 111, 112, 121, 122, 181, 181B; one course from Geography 110, 121, 125, M128, 133, 140, 161, 162A, 182B, 183, 185, 186, 187; two courses from History 113A, 113B, 114A, 123A, 125B, 137A, 137B, 140C, 144.

Completion of the sixth quarter course (or equivalent as prescribed by the language department), with a grade of C or better, of any modern foreign language is also required. French 6, German 6, Spanish 25, and Russian 6 are most frequently offered in fulfillment of this requirement, but also refer to the offerings listed under African Languages, Asian Languages and Cultures, Germanic Languages, Italian, Near Eastern Languages and Cultures, and Portuguese. Arabic, Chinese, French, German, Japanese, Russian, and Spanish are the languages of widest career utility in international affairs.

Each course must be taken for a letter grade.

Area Focus
Students are advised but not required to concentrate their political science, geography, history, and language courses so as to achieve broad familiarity with one area, such as Africa, East Asia, Europe, Latin America, the Middle East, South Asia, or Southeast Asia.

For further information, contact the Undergraduate Office, 4269A/4269B Bunche Hall.

Political Science Minor
The Political Science minor introduces students to political 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, 4269A/4269B Bunche Hall.

Required Lower Division Courses (10 units):
Any two lower division political science courses.

Required Upper Division Courses (20 units):
Any five upper division political science courses. At least three of the five courses 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, http://www.gdnnet.ucla.edu/gasaa/library/pgmreqintro.htm. 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 (M.A.), Candidate in Philosophy (C.Phil.), and Doctor of Philosophy (Ph.D.) 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 6. 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 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.

88A-88D. Lower Division Seminars. (4 each) Seminar, three hours. Limited to freshmen/sophomores. Opportunities to develop writing, verbal, and reasoning skills. General introduction to a subfield of a major area, or intensive exploration of a particular theme or topic. Variable topics; consult Schedule of Classes for topics to be offered in a specific term. May not be repeated for credit except by students who receive a grade of C- or higher in each (when scheduled). P/NP or letter grading.


M105. Economic Models of Public Choice. (4) (Same as Economics M135.) Lecture, three or four hours; discussion, one hour (when scheduled). Preparatory requisites: Economics 11. Designed for juniors/seniors. Analysis of methods and consequences of arriving at collective decisions through political mechanisms. Topics include free-rider problem, voting and majoritarian logic, democratic representation, and political bargaining. P/NP or letter grading.


M107. Women and Politics. (4) (Same as Women's Studies M117.) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Introduction to rapidly growing body of empirical and theoretical scholarship on women and politics in both national and international contexts. Topics may include women's political experience and gender; women's electoral participation; representation of women in Congress and in legislatures worldwide; women as heads of government and state; feminist critiques of political philosophies and citizen rights; SRA; women's struggle for suffrage; mothers as political actors; women and military; women, development, and globalization. P/NP or letter grading.

Field I: Political Theory

M111A-111B-111C. History of Political Thought. (4-4-4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Exposition and critical analysis of major political philosophers and schools. P/NP or letter grading. M111A. An-cient and Medieval Political Thought from Plato to Machiavelli. (Same as Classics M121.) M111B. Early Modern Political Theory from Hobbes to Bentham. M111C. Late Modern and Contemporary Political Theory from Hegel to the Present.

112A. Democratic Theory. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Critical analysis of selected major authors, issues, and arguments in contemporary democratic theory.

M112B. Invention of Democratic Theory. (4) (Same as Classics M125.) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/se-niors. Democratic theory was invented in ancient Greece. Political form grounded on equality before law, citizenship, and freedom. It came into existence as struggle by “demos,” people, aware of its excellence and pride of its power, “kratos.” It became only regime capable of including minorities, while disregarding wealth, status, and diverging interests. Examination of history and theory of ancient democracy. P/NP or letter grading.

113A. Problems in 20th-Century Political Theory. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Study and interpretation of theorists who have focused their analyses on social and political problems of 20th cen-tury P/NP or letter grading. 113B. Politics, Theory, and Film. (4) Seminar, four hours. Requisite: course 10. Designed for juniors/seniors. Intense and individualized examination of central issues in political theory such as power and truth in light of relevant political theorists. P/NP or letter grading.

114A-114B. American Political Thought. (4-4) Lecture, three or four hours; discussion, one hour (when scheduled). 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.

116A. Marxism. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Study of important text in continental political theory, including relationship between politics and religion, skepticism, and political freedom. P/NP or letter grading.

117. Jurisprudence. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Study of important text in continental political theory, including relationship between politics and religion, skepticism, and political freedom. P/NP or letter grading.

M119A. Modern Receptions of Ancient Political Theory. (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.

119B. Continental Political Thought. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Study of important text in continental political theory, including relationship between politics and religion, skepticism, and political freedom. P/NP or letter grading.

M120A. Modern Receptions of Ancient Political Thought. (4) (Same as Classics M134.) 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 Plato, Aristotle, and Machia-velian amorality, democratic responsibility and repre-sentation, ethics of compromise, dirty hands problems, international ethics. Letter grading.

M115C. Citizenship and Public Service. (4) (Formerly numbered 115C.) (Same as Civic Engagement M115.) Lecture, three or four hours; discussion, one hour (when scheduled). Recommended requisite: course 10. Designed for juniors/seniors. Study of ways in which political theorists have 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.

M115D. Diversity, Disagreement, and Democracy: Can We All Just Get Along? (4) (Same as Human Complex Systems M140D.) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Can’t we all just get along? Study of diversity, disagreement, and democracy. Di-versity covers individual differences, cultural differences, and human universals; groupism, factionalism, and identity politics; multiculturalism and one-world ethics. Disagreement includes moral, ideological, and party-political disagreement; resolvable and irresolvable kinds of disagreement; conceptions of polarization; herding and information cascades. Democracy stands for political mechanisms of information aggre-gation; political mechanisms to resolve differences, or to keep peace among wide-ranging differences; emergence and spread of democracy, liberty, and rule of law. Letter grading.

116A. Feminism. (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. Controversiality and Public Debate. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Study of important text in twentieth century political theory, including relationship between politics and religion, skepticism, and political freedom. 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 jun-iors/seniors. Video lectures by leading scholars as well as live lectures and discussion on complex prob-lems such as terrorism, nuclear proliferation, and Arab-Israeli conflict. P/NP or letter grading.
M120C. U.S. Intelligence Agencies in Theory and Practice. (4) [Same as Public Policy M118.] Lecture, three hours; discussion, one hour (when scheduled). Limited to juniors/seniors. Examination of U.S. intelligence agencies from Cold War to present. Particularly in light of 9/11 and Iraq war, few organizations are more important and less understood. Three separate facets from current policy, comparing how intelligence agencies are portrayed in popular culture and how policymakers develop strategies to address them. Exploration of Cold War legacy, development of American national security and intelligence community strategic doctrine, and U.S. foreign policymaking process from 1945 to present. Examination of broad spectrum of issues confronting today’s foreign policy leaders, from threats to vital U.S. interests (WMD proliferation and terrorism), to regional security and economic challenges (Iraq, China), to humanitarian intervention and nation-building (Darfur, Afghanistan). Students draft analytic options memos and deliver oral presentations on how to handle six intelligence national security mini-cases. Provides overview of current challenges and hones student analytic skills to examine these challenges from strategic policy perspective. Letter grade or pass/fail.

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, conditions of war, and how policymakers develop strategies to address them. Exploration of Cold War legacy, development of American national security strategic doctrine, and U.S. foreign policymaking process from 1945 to present. Examination of broad spectrum of issues confronting today’s foreign policy leaders, from threats to vital U.S. interests (WMD proliferation and terrorism), to regional security and economic challenges (Iraq, China), to humanitarian intervention and nation-building (Darfur, Afghanistan). Students draft analytic options memos and deliver oral presentations on how to handle six intelligence national security mini-cases. Provides overview of current challenges and hones student analytic skills to examine these challenges from strategic policy perspective.

127A-127B. Atlantic Area in World Politics. (4-4) Lecture, three or four hours; discussion, one hour (when scheduled). Requisites: courses 20, 128A. Designed for juniors/seniors. Survey of foreign policy of post-Communist Russia, with special emphasis on Russian relations with NATO, the former communist states of East Central Europe, China, and the Commonwealth of Independent States. Diplomacy and War. (4) (Not same as course 129 prior to Winter Quarter 2008.) Lecture, three or four hours; discussion, one hour (when scheduled). Requisites: courses 20, 128A. Designed for juniors/seniors. Survey of foreign policy of post-Communist Russia, with special emphasis on Russian relations with NATO, the former communist states of East Central Europe, China, and the Commonwealth of Independent States. Diplomacy and War. (4) (Not same as course 129 prior to Winter Quarter 2008.) Lecture, three or four hours; discussion, one hour (when scheduled). Requisites: courses 20, 128A. Designed for juniors/seniors. Survey of foreign policy of post-Communist Russia, with special emphasis on Russian relations with NATO, the former communist states of East Central Europe, China, and the Commonwealth of Independent States. Diplomacy and War. (4) (Not same as course 129 prior to Winter Quarter 2008.) Lecture, three or four hours; discussion, one hour (when scheduled). Requisites: courses 20, 128A. Designed for juniors/seniors. Survey of foreign policy of post-Communist Russia, with special emphasis on Russian relations with NATO, the former communist states of East Central Europe, China, and the Commonwealth of Independent States.

127B. Western Europe. External relations of United Kingdom, West Germany, France, Italy, and other European members of NATO, in regard to European security in context of the Atlantic Alliance. 127B. U.S. and Europe. Requisite: course 127A. Relations between the U.S. and Western Europe in context of the Atlantic Alliance, in context of U.S./Soviet relations.


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. Survey of foreign policy of post-Communist Russia, with special emphasis on Russia’s relations with NATO, the former communist states of East Central Europe, China, and the Commonwealth of Independent States. Diplomacy and War. (4) (Not same as course 129 prior to Winter Quarter 2008.) Lecture, three or four hours; discussion, one hour (when scheduled). Requisites: courses 20, 128A. Designed for juniors/seniors. Survey of foreign policy of post-Communist Russia, with special emphasis on Russia’s relations with NATO, the former communist states of East Central Europe, China, and the Commonwealth of Independent States. Diplomacy and War. (4) (Not same as course 129 prior to Winter Quarter 2008.) Lecture, three or four hours; discussion, one hour (when scheduled). Requisites: courses 20, 128A. Designed for juniors/seniors. Survey of foreign policy of post-Communist Russia, with special emphasis on Russia’s relations with NATO, the former communist states of East Central Europe, China, and the Commonwealth of Independent States.

129. Diplomacy and War. (4) Not same as course 129 prior to Winter Quarter 2008.) Lecture, three or four hours; discussion, one hour (when scheduled). Requisite: course 20 or 127A. Designed for seniors. Analysis of role of diplomacy in great power politics, history of diplomatic institutions, advantages of public and private diplomacy, bilateral and multilateral settings, and theory and practice of deterrence and coercion. Use of game theoretic reasoning and historical analysis. Prior exposure to both useful but not required. P/NP or letter grading.

130. Latin American International Relations. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Requisite: course 20. Contemporary regional issues and conflicts, with particular attention to Arab-Israeli problem, and Persian Gulf area. M132B. International Relations of Sub-Saharan Africa. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for seniors. Contemporary regional issues and foreign policies of African states; role of external powers.

132A-M132B. International Relations of Middle East. (4-4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Contemporary regional issues and foreign policies of African states; role of external powers. 132A. Contemporary regional issues and foreign policies of African states; role of external powers.

133. International Relations of Sub-Saharan Africa. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for seniors. Contemporary regional issues and foreign policies of African states; role of external powers.

134. Foreign Policy Decision Making and Tools of Statecraft. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Requisite: course 120A. Designed for seniors. Concept of statecraft and process models of individual and group decision making. Impact of strategic interaction and situational factors on foreign policy decision making. Implications for policy choice of tools of statecraft (i.e., threats/promises, military/economic/diplomacy). P/NP or letter grading.

135. International Relations of China. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Requisite: course 20. Designed for juniors/seniors. Relations of China with its neighbors and the other powers, with emphasis on contemporary interests and policies of China vis-a-vis the U.S. and Soviet Union.

136. International Relations of Japan. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Requisite: course 20. Designed for juniors/seniors. Foreign policies of Japan and interests and policies of other countries, particularly the U.S., as they relate to Japan.

137A-137B. International Relations Theory. (4-4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. 137A. Examination of various theoretical approaches to international relations. P/NP or letter grading. 137B. Alternative approaches to analysis of international politics and their application to historical and contemporary cases.

138A. International Politics, 1815 to 1914. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for seniors. Classic period of European great power politics, beginning with peace settlement at end of Napoleonic Wars, 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 seniors. First World War, failure of peace settlement, origins of Second World War, Cold War, and post-Cold War period. P/NP or letter grading.

139. Special Studies in International Relations. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Requisites: two courses in Field II, or course 20 and one course in Field II. Designed for juniors/seniors. Intensive examination of one or more special problems appropriate to international relations. Sections offered on regular basis, with topics announced in preceding term. May be repeated for credit with topic change. P/NP or letter grading.

139B. Nuclear Weapons: Critical Decisions. (4) [Same as Environment M165, Honors Collegium M119, and Public Policy M116.] Lecture, three hours. Examination of critical decisions regarding nuclear weapons, starting with President Roosevelt’s decision to build atomic bomb and ending with current policies on containing nuclear proliferation and on avoiding nuclear catastrophe. 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. 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. Introduction to American 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 current commentaries.

141A-141L. Electoral Politics. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. P/NP or letter grading.

141A. Political Psychology. (4) [Same as Psychology M120A.] Lecture, three or four hours; discussion, one hour (when scheduled). Requisite: course 40. Designed for seniors. Examination of political behavior, political socialization, personality and politics, racism, conflict, and psychological analysis of public opinion on these issues. P/NP or letter grading.
globalization, restructuring, and regional development, (2) citizenship, democracy, and regional governance, (3) effects of globalization on processes on contemporary local politics, (4) effectiveness of political structures and electoral politics.

M144C. Equal Rights and Unequal Education. (4) (Same as Education M186 and Public Policy M186.) Lecture, four hours; discussion, one hour (when scheduled). Requisite: course 40. Designed for juniors/seniors. Extensive examination of one or more topics to be offered in different years. Discussion of American public education, with emphasis on issues of inequality.


145A. Anglo-American Legal System. (4) Lecture, four hours; discussion, one hour (when scheduled). Requisite: course 40. Designed for juniors/seniors. Examination of the historical development of the Anglo-American legal system and the fundamental concepts of law and justice. P/NP or letter grading.


145C. Constitutional Law — Civil Liberties. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Requisite: course 40. Designed for juniors/seniors. Legal analysis and protection of civil liberties. P/NP or letter grading.

145D. Judicial Oversight of Bureaucracy. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Requisite: course 40. Designed for juniors/seniors. Study of judicial oversight of administrative agencies and the role of the judiciary in the American political process. P/NP or letter grading.

146A. Public Administration and Policy. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Requisite: course 40. Designed for juniors/seniors. Legal controls of administrative action. Substantive and procedural limits on administrative discretion imposed by legislation, executive and judicial agencies, and sources of administrative bodies within these limits. P/NP or letter grading.


146C. Governing the Bureaucracy in the U.S. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Requisite: course 40. Designed for juniors/seniors. Relationship between elected officials and administrators in the U.S., especially efforts of elected and appointed officials to monitor and control behavior of those in government. P/NP or letter grading.

146D. Theories of Organization and Decision Making. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Requisite: course 40. Designed for juniors/seniors. Examination of decision-making frameworks for studying public and private bureaucracies, with emphasis on political and economic patterns, and concepts of organization. P/NP or letter grading.

145E. 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 the U.S., including roles of federal, state, and local agencies as well as public organizations. Subsections offered on particular policy areas, with topics announced in advance. P/NP or letter grading.

145F. Politics, Ethics, and Business. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Requisite: course 40. Designed for juniors/seniors. Examination of business ethics and the role of government. P/NP or letter grading.

146G. Social Life of Information. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Requisite: course 40. Designed for juniors/seniors. Examination of how information moves from those who have it to those who need it. Information flows in organizations, and network analysis. How information circulates in organizations. P/NP or letter grading.

146H. Theories of Organization and Decision Making. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Requisite: course 40. Designed for juniors/seniors. Examination of organizational theory and decision making. P/NP or letter grading.

147A. Overview. (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 an understanding of how institutions of government have evolved 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 of period to be covered and how they contribute to our understanding of contemporary politics. 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 over time, or interaction of American politics and institutions with some aspect of society and culture. 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. Designed for juniors/seniors. Intensive examination of one or more special problems appropriate to American politics. Sections offered on
151A-151B-151C. African Politics. (4-4-4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Letterm grading.
151A. Government and Politics of Africa. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Letterm grading.
151B. Political Economy of Africa. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Examination of interactions 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.
152A-152B-152C. Government and Politics of West European Countries. (4-4-4) 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 state/society relations, interaction of politics and economic development, political institutions, and conflict and conflict resolution. Letter grading.
152A. Government and Politics of Western Europe, especially Britain, France, or Germany, with particular attention to contemporary problems. P/NP or letter grading.
152B. Political Economy of West European Countries. (4-4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Comparative study of governmental and political institutions, one hour (when scheduled). Designed for juniors/seniors. Comparative study of governmental and political institutions, one hour (when scheduled). Designed for juniors/seniors. Analysis of bureaucratic structures and function in the U.S., other industrialized, and less developed countries, primarily at national level. Special attention to methods of comparative analysis and utility of various methods. P/NP or letter grading.
153A-153B. Comparative Government and Politics of Western Europe. (4-4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Letterm grading.
153A. West European Government and Politics. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Letterm grading.
153B. Game-Theoretic Approach to West European Politics. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Course 153A is not requisiteto 153B. Designed for juniors/seniors. Uses of elementary game theory to investigate post-War II Western European politics. Social and political forces, and political institutions. Particular emphasis on study of three West European countries United Kingdom, France, and Federal Republic of Germany. Consideration of current developments and comparisons with the U.S. 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 in the Latin American republics. P/NP or letter grading.
154A. States of Middle America. Enforced requisites: courses 50 or 50R; 154B. States of South America.
155. Advanced Pluralist Democracies. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Main features and basic problems of economically advanced democracies, analyzed in comparative framework. Topic by topic. Emphasis on cross-Atlantic comparisons, not only political but also sociological.

156A-156D. Government and Politics of Post-Communist States. (4 each) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. P/NP or letter grading.
156A. 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 the Soviet Union. P/NP or letter grading.
156B. Eastern Europe. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Survey of institutions and political processes in selected post-Communist states of Eastern Europe. P/NP or letter grading.
156C. Post-Soviet States. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Survey of institutions and political processes in selected former Soviet republics other than Russia. P/NP or letter grading.
156D. Political Economy of Post-Communist Reform. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Focused study of interaction between transitions to democracy and to the market in selected post-Communist countries, with emphasis on development of general theories of political and economic reform. 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 and politics in contemporary Africa, with special attention to state/society relations, interaction of politics and economic development, political institutions, and conflict and conflict resolution. Letter grading.
158. Southeast Asian Politics. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Course: course 50. Designed for juniors/seniors. Survey of political environment in major Southeast Asian states. Use of comparative analysis to address major problems confronting these states, including democratisation, 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. Survey of political environment in major Southeast Asian states. Use of comparative analysis to address major problems confronting these states, including democratisation, economic growth, drug trade, deforestation, and security threats. Letter grading.
160. Government and Politics of Japan. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Letterm grading.
161. Comparative History of Government from Earliest Times to Present Day. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Recommended requisite: course 50. Designed for juniors/seniors. Historical diversity of forms of government: archetypal politics, great empires, major innovations, nottable variants. P/NP or letter grading.
165. Islam and Politics. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Religious and spiritual foundations of Islamic legal and political institutions; legitimacy of historical and contemporary regimes, movements, and ideologies; political strategies of Islamic activism. P/NP or letter grading.
166. Comparative Analysis of Government Institutions. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Comparison of major institutional structures such as presidentialism vs. parliamentarism, unicameralism vs. bicameralism, two-party vs. multi-party systems, federal vs. unitary systems, pluralism vs. proportional electoral systems, etc. Method of analysis is rational choice. P/NP or letter grading.
167A. Ideology and Development in World Politics. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Required: course 50. Designed for juniors/seniors. Development in Russia, with special attention to methods of comparative analysis and utility of various methods. P/NP or letter grading.
M167C. Political Economy of Development. (4) (Same as International Development Studies M100B.) Lecture, three or four hours; discussion, one hour (when scheduled). Required: course 50. Designed for juniors/seniors. Letterm grading.
167D. Political Institutions and Economic Development. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Preparation: one statistics course. Designed for juniors/seniors. Letterm grading.
168. Comparative Political Analysis. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Requisites: two courses in Field IV, or course 50 and one course in Field IV. Designed for juniors/se- niors. Major approaches to study of comparative politics. Concepts and methodology of comparative analysis. Letter grading.
169. Special Studies in Comparative Politics. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Preparation: one statistics course. Designed for juniors/seniors. Letterm grading.
170A. Studies in Statistical Analysis of Political Data. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Enforced requisit: course 6 or 6R. Designed for juniors/seniors. Letterm grading. 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 ar-
guments related to world of politics. Consult Schedule of Classes for topics to be offered in specific term. P/NP or letter grading.

171A. Applied Formal Models: Collective Action and Social Movements. (4) Lecture, three or four hours; discussion, one hour (when scheduled). Requisite: course 30. Designed for juniors/seniors. How do social movements become convivial or peculiar to participate? Consideration of various theoretical perspectives, including game-theoretic, social network, structural, and identity approaches, illustrated by case studies. 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 negotiation and bargaining in different contexts. Experimental 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). Enforced: 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. Introduction to political economy of racial discrimination and exploitation of Mexican origin communities. Emphasis on identifying and explaining historically changing relationship between class, race, and power by studying interaction between state policies and political, economic, and social stratification systems, and cultural codes and modes of ideological discourse in each historical period. Letter grading.

M182. Ethnic Politics: African American Politics. (4) (Formerly numbered M144B.) (Same as Afro-American Studies M144.) 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. Emphasis on dynamics of minority group politics in U.S., touching on conditions facing racial and ethnic groups, with black Americans being primary case for analysis. Three primary objectives: (1) to provide descriptive information about social, political, and economic conditions of black Americans, (2) to analyze important political issues facing black Americans, (3) to sharpen students’ analytical skills. P/NP or letter grading.

M184. Black Experience in Latin America and Caribbean. (4) (Formerly numbered M144C.) Same as Afro-American Studies M154C.) Lecture, three or four hours; discussion, one hour (when scheduled). Requisite: senior or upper division credit in Africana Studies or Africana America. Culture, history, politics, and identity of Afro-descendants in Latin America and the 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.

Special Studies

190. Research Colloquium in Political Science. (1) Seminar, one hour. Designed to bring together students undertaking original 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 Colloquium 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 theses. Led by one supervising faculty member. P/NP grading.


191H. Research Design Seminar for Honors Thesis. (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. Requisite: all students who wish to write honors theses. May be repeated for credit. Design and development of original empirical research based on experiences from Washington, DC-based field placements. Study of variety of qualitative methods (observation, interviewing, etc.), with emphasis on quantitative analysis. Examination of features of solid and significant research; intensive writing. Letter grading.

195. Community or Corporate Internships in Political Science. (2 or 4) Tutorial, to be arranged. Preparation: 3.0 overall grade-point average. Limited to juniors/seniors. Supervised jointly by Center for Community Learning and undergraduate studies committee. May be repeated for credit. P/NP grading.

M194DC. CAPP Program Internships in Washington, DC. (8) Seminar, four hours. Limited to CAPP-P Program students. Internships in Washington, DC, through Center for American Politics and Public Policy’s program in Washington, DC. May be repeated for credit. P/NP grading.

M194DC. CAPP Program Internships in Washington, DC. Internships. (4) Same as History M194DC and Sociology M194DC.) Seminar, three hours. Limited to CAPP-P 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. May be repeated for credit. P/NP grading.

M195CE. Community and Corporate Internships in Political Science. (4) Tutorial, to be arranged: fieldwork, eight to ten hours. Limited to juniors/seniors. Internship in corporate, nonprofit 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. No more than 8 units may be applied toward major; units may be applied toward credit. P/NP grading.

M196B. African American Freedom Narratives. (4) (Formerly numbered M114C.) Same as Afro-American Studies M114C and Labor and Workplace Studies M114C.) Lecture, three or four hours; discussion, one hour (when scheduled). Enforced: one 140-level course or one upper division course on race or ethnicity from history, psychology, or sociology. Requisite: course 30. Designed for juniors/seniors. Understanding of black radicalism in mid-20th century, with special attention to contribution of Malcolm X and black nationalism to African American liberation movement. P/NP or letter grading.

181. Ethnic Politics: Chicano/Latino Politics. (4) (Formerly numbered M144A.) Lecture, three or four hours; discussion, one hour (when scheduled). Prepara- tion: 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. Introduction to political economy of racial discrimination and exploitation of Mexican origin communities. Emphasis on identifying and explaining historically changing relationship between class, race, and power by studying interaction between state policies and political, economic, and social stratification systems, and cultural codes and modes of ideological discourse in each historical period. Letter grading.
Graduate Courses

Formal Theory and Quantitative Methods


204B. Game Theory in Politics II. (4) Seminar, three hours. Discussion of approaches used to explain for- mulation and negotiation. Use of various theoretical approaches to explaining strategic interaction, including psycholo- gy, bargaining theory, and game theory. Applications concern political participation, public goods, legislatures, interest groups, and party competition. Designed to help students become informed consumers of game-theoreti- cal literature in political science. S/U or letter grading.

204D. Quantitative Methods in Politics. (4) Seminar, three hours. Preparation: knowledge of calculus and matrix algebra. Recommended requisite: course 200C. Designed to build foundations set in course 200C. Focus on logical and mathematical structure un- derlying some statistical methods that are frequently used in political science. Special emphasis on understanding the structure of the models rather than on gaining added experience using them to analyze data. Applied data analysis. Letter grading.

205. Advanced Topics in Quantitative Methods. (4) Seminar, three hours. Topics vary each year and have included experimental variables principal compo- nents and scaling, models of selection, models of du- ration, ecological inference, and hierarchical models. Student-led presentations on relevant statistical theory and applications. Monte Carlo simulations and replication of well-known studies used to demonstrate how various models work and how they are applied in pract- ice. S/U or letter grading.

220A. International Relations Core Seminar I. (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 con- tract, voting rules, paradoxes and impossibility theo- rems, stability, individual liberty and decentralization, strategic manipulation, representation, veto, and infor- mation. Letter grading.


220C. 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, veto, and information. Letter grading.

220D. Bayesian Econometrics. (4) Same as Economics M232A. Lecture, three hours. Requisites: Economics P11A, P11B. 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.

221. Seminar: Seminar: Strategic Interaction. (4) Seminar, three hours. Discussion of approaches used to explain for- mulation and negotiation. Use of various theoretical approaches to explaining strategic interaction, including psycholo- gy, bargaining theory, and game theory. Applications concern political participation, public goods, legislatures, interest groups, and party competition. Designed to help students become informed consumers of game-theoreti- cal literature in political science. S/U or letter grading.

222. Seminar: Seminar: Strategic Interaction. (4) Seminar, three hours. Discussion of approaches used to explain for- mulation and negotiation. Use of various theoretical approaches to explaining strategic interaction, including psycholo- gy, bargaining theory, and game theory. Applications concern political participation, public goods, legislatures, interest groups, and party competition. Designed to help students become informed consumers of game-theoreti- cal literature in political science. S/U or letter grading.

223. Politics and Strategies of Modern War. (4) Seminar, three hours. A strategic move influences the other per- son’s choice by affecting his expectations of how he will behave. Discussion of theories of deterrence, coer- cive diplomacy, crisis management, war termination, and negotiation. Use of various theoretical approaches to explaining strategic interaction, including psycholo- gy, bargaining theory, and game theory.

225. American Foreign Policy. (4) Seminar, three hours. An analysis of academic and professional work in international relations and introduction to de- sign of research project in this area. Letter grading.

226. Making of American Foreign Policy. (4) Seminar, three hours. An analysis of academic and professional work in international relations and introduction to de- sign of research project in this area. Letter grading.

230A. Introduction to Political Theory. (4-4) Lecture, three hours. Exploration of major texts and issues in political theory. 230A. Classical and Medieval Foundations (From Plato through Machiavelli) 8459. Early Modern Period from Machiavelli through the Enlighten- ment.


233. Liberalism and Its Critics. (4) Seminar, three hours; discussion, one hour (when scheduled). Critical examination of selected text from post- colonial, spatial, feminist, postmodern, and post-struc- turalist theories that address issues of globalization on major concepts and problems of tradi- tional social and political theory as sovereignty, citizenship, rights, community, representation, and demo- cracy. S/U or letter grading.

234. Game Theory in Politics I. (4) Formerly num- bered 204. Seminar, three hours. Survey of game the- ory, with emphasis on utilizing mathematical models to understand political and economic phenomena. Appli- cations concern political participation, public goods, legislatures, interest groups, party competition. Designed to help students become informed consumers of game-theo- retical literature in political science. S/U or letter grading.

235. Seminar: Political Theory. (4) Seminar, three hours. Discussion, one hour (when scheduled). Examination of works of one or more major contemporary lib- eral theorists (Rawls, Dworkin, Habermas, Nussbaum, etc.) in light of issues which have been proposed to the liberal position (communitarianism, post-struc- turalism, group rights theories, etc.). S/U or letter grading.

236. Toleration, Pluralism, and Diversity. (4) Same as Public Policy M248.) Seminar, three hours. Prior experience in political or legal theory helpful. Ex- ploration of both abstract concepts of toleration and contemporary disputes. S/U or letter grading.

237. Selected Topics in Political Theory. (4) Semi- nar, three hours. Critical examination of major texts in political theory, with particular attention to their philo- sophostic system, their relations to contemporary political and intellectual currents, and importance of system for present-day political analysis. S/U or letter grading.

238. Selected Topics in Political Theory. (4) Semi- nar, three hours. Critical examination of major problem in political theory S/U or letter grading.

239. Workshop: Political Theory. (4) Discussion, three hours. S/U or letter grading.

International Relations


220B. International Relations Core Seminar II. (4) Seminar, three hours. Fundamental analysis of academic work in international relations and introduction to de- sign of research project in this area. Letter grading.

220C. International Relations Research Seminar. (4) Seminar, three hours; tutorial meetings, to be ar- ranged. Design, implementation, and presentation of research project in international relations within combi- nation of seminar and tutorial settings. Letter grading.

222. Seminar: Strategic Interaction. (4) Seminar, three hours. A strategic move influences the other per- son’s choice by affecting his expectations of how he will behave. Discussion of theories of deterrence, coer- cive diplomacy, crisis management, war termination, and negotiation. Use of various theoretical approaches to explaining strategic interaction, including psycholo- gy, bargaining theory, and game theory.


225. American Foreign Policy. (4) Discussion, three hours. Discussion of approaches used to explain for- mulation and negotiation. Use of various theoretical approaches to explaining strategic interaction, including psycholo- gy, bargaining theory, and game theory.


230. Contending Perspectives on International Poli
tical Economy. (4) Seminar, three hours. Introduction to and discussion of various theoretical approaches to international political economy.

231. International Political Economy I. (4) Seminar, three hours. Designed to develop Ph.D. students' skills in setting up and solving simple 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-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. Survey of contemporary research approaches and problems in Japanese and Western Pacific politics. S/U or letter grading.


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). Focus on evolution of Soviet and Russian political system 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 economic 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; discussion, one hour (when scheduled). Theories and practices of political parties, party systems, and elections in a comparative perspective.

253. Political Change in Communist Systems. (4) Discussion, three hours. Examination of political context and consequences of structural reform in Communist systems; theories of post-Leninist political pluralization and conformation.

254A-254B. Institutions and Comparative Politics. (4-4) Seminar, three hours; discussion, one hour (when scheduled). 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. parliamen
tarism, unicameralism vs. bicameralism, two-party vs. multiparty systems, cadre vs. mass parties, and plurality vs. proportional electoral systems.

254B. Political Institutions, Delegation, and Policy-Making. (4) Seminar, three hours; discussion, one hour (when scheduled). Comparative analysis of delegation and policy-making processes and decision-making processes for economic reform and consideration of political implications for market system, banking and finance, corporate enterprise, and organized labor. S/U or letter grading.

256. 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.


262. Political Parties. (4) Seminar, three hours. Examination of the role of political parties in all subfields of political science as well as policy studies. Special attention to American political parties. S/U or letter grading.

265. Politics and Economy. (4) Seminar, three hours. Application of selected classical and contemporary sociological theories to politics and modern research in American political behavior. Letter grading.

266. Political Environment of Federal Executive. (4) Seminar, three hours. Special attention to executive/legislative relations. S/U or letter grading.

268. Seminar: Political and Electoral Problems. (4) Seminar, 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.


270. Legislative Behavior. (4) Seminar, three hours. Analysis of major approaches and problems in all subfields of political science as well as policy studies. S/U or letter grading.

271. Executive Politics and Presidency. (4) Seminar, three hours. Analysis of major approaches and problems in all subfields of political science as well as policy studies. S/U or letter grading.


American Politics


262A. Proseminar: Political Psychology. (4) Seminar, three hours. Introduction to political psychology: psychobiography, personality and politics, mass attitudes, group conflict, political communication, and elite decision making.

26B. Mass Attitudes and Political Behavior. (4) Seminar, three hours. Requisite: course 141B. Examination of political behavior, political socialization, racial conflict, mass political movements, and public opinion. S/U or letter grading.

262C. 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 analyses of media bias.

M261D. Seminar: Political Psychology. (4) Same as Psychology M228B. Discussion, three hours. Requisite: course M261A or Psychology M229A. Examination of political behavior, political socialization, racial conflict, mass political movements, and public opinion. S/U or letter grading.

M261E. Critical Problems in Political Psychology. (4) Same as Psychology M228C. Discussion, three hours. 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.


M268B. Electoral Democracy: Theory and Behavior. (4) Same as Public Policy M246. Seminar, three hours. Examination of both empirical and normative questions from rich variation in the literature on elections for scholars in all subfields of political science as well as policy students. S/U or letter grading.


270. Legislative Behavior. (4) Seminar, three hours. Analysis of major approaches and problems in all subfields of political science as well as policy studies. S/U or letter grading.

271. Executive Politics and Presidency. (4) Seminar, three hours. Analysis of major approaches and problems in all subfields of political science as well as policy studies. S/U or letter grading.

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PSYCHIATRY AND BIOBEBHAVIORAL SCIENCES
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Alex J. Kopelowicz, M.D., Vice Chair
Ira M. Lesser, M.D., Vice Chair
James T. McCracken, M.D., Vice Chair
Mark H. Rapaport, M.D., Vice Chair
Robert T. Rubin, M.D., Ph.D., Vice Chair
Thomas B. Strouse, M.D., Vice Chair
Tai P. Voo, M.D., Vice Chair
Michael S. Levine, Ph.D., Associate Chair, Academic Affairs

Professors
Lori L. Altschuler, M.D., in Residence (Julia S. Gouw, Professor of Mood Disorders)
Donna Ames, M.D., in Residence
M. Douglas Anglin, Ph.D., in Residence
Joan R. Asarnow, Ph.D., in Residence
Robert F. Asarnow, Ph.D., in Residence (Della Martin Professor of Psychiatry)
Bernard W. Balleine, Ph.D.
George Bartzokis, M.D., in Residence
Thomas F. Belin, Ph.D.
Robert M. Bilder, Ph.D., in Residence (Michael E. Tennenbaum Family Endowed Professor of Creative Residency)
Gene D. Block, Ph.D., Chancellor
Sally M. Blower, Ph.D., in Residence

Susan Y. Bookheimer, Ph.D., in Residence (Joaquín M. Fuster Professor of Cognitive Neuroscience)
James T. Boulter, Ph.D., in Residence
Joel T. Braslow, M.D., Ph.D., in Residence (Frances M. O’Malley Administrative Professor of Neuroscience History)
Andrew L. Brody, M.D., in Residence (Richard Metzner Endowed Professor of Clinical Neuropsychopharmacology)
Carole H. Browner, Ph.D., in Residence
Alexander Bystritsky, M.D., Ph.D., in Residence
Anthony T. Campagnone, Ph.D., in Residence (Vincent and Stella Coates Professor of Molecular Neurobiology)
Tyrone D. Cannon, Ph.D. (Staglin Family Professor of Psychology)
Rita M. Cantor, Ph.D., in Residence
Robert T. Rubin, M.D., Professor of Psychiatry
Ira M. Lesser, M.D., in Residence
Michael S. Fanselow, Ph.D.
Kym F. Faull, Ph.D., in Residence
Fawzy I. Fawzy, M.D. (Dr. Louis Jolyon West Professor of Psychiatry)
Robin S. Fisher, Ph.D., in Residence
L. Jaime Fitten, M.D., in Residence
Frederick D. Frankel, Ph.D., in Residence
 getline B. Freimer, Ph.D., in Residence (Stefan Hafos Endowed Professor of Psychiatry and Biobehavioral Sciences)
Itzehard Fried, M.D., Ph.D., in Residence
Andrew J. Fuligni, Ph.D., in Residence
Thomas R. Garnick, M.D., Ph.D., in Residence
Daniel H. Geschwind, M.D., Ph.D., in Residence (Gordon and Virginia MacDonald Distinguished Professor of Human Genetics)
Michael F. Green, Ph.D., in Residence
Christine E. Grella, Ph.D., Ph.D., in Residence
Constance L. Hammenn, Ph.D.
Charles H. Hinkin, Ph.D., in Residence
Yih-Ing Hser, Ph.D., in Residence
Marco Iacoboni, M.D., Ph.D., in Residence
Michael R. Irwin, M.D., in Residence (Norman Cousins Endowed Professor of Psychoneuroimmunology)
J. David Jentsch, Ph.D.
Christopher J. Evans, Ph.D., in Residence
Harley L. Kornblum, M.D., Ph.D., in Residence (Eleanor J. Leslie Professor of Pioneering Brain Research)
Helen Lavretsky, M.D., in Residence
Ira M. Lesser, M.D.
Andrew F. Leuchter, M.D.
Michael S. Levine, Ph.D., in Residence (Gail Patrick Endowed Administrative Professor of Brain Research)
Jennifer G. Levitt, M.D., in Residence
Matthew D. Lieberman, Ph.D.
Walter Ling, M.D., in Residence
Edith D. London, Ph.D., in Residence (Thomas P. and Katherine K. Pike Professor of Addictive Studies)
Nigel T. Campbell, Ph.D., in Residence
Stephen R. Marder, M.D., in Residence
Kelsey C. Martin, M.D., Ph.D., in Residence (Eleanor J. Leslie Professor of Innovative Brain Research)
Gary W. Mathern, M.D., in Residence
Erica Mayer, M.D.
James T. McCracken, M.D. (Joseph Campbell Professor of Child Psychiatry)
Scopes and Objectives

The Department of Psychiatry and Biobehavioral Sciences offers interdisciplinary courses related to the mental health professions of the biobehavioral sciences in addition to its programs for psychiatry interns and residents and for medical students.

Enrollment 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 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, 38-232 Semel Institute, (310) 794-5715, e-mail dcrawford@mednet.ucla.edu, or see http://www.ssemel.ucla.edu/psychology/internship/

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

Upper Division Courses

M180. Contemporary Problems in Developmental Disabilities. (4) (Same as Psychology M180.) Seminar, three hours. Corequisite: course M181. Limited to Developmental Disabilities Program students. Examination of broad spectrum of issues related to mental retardation, intelligence and IQ, genetics, neurobiology, and other developmental disabilities. P/NP or letter grading.


M182. Communication of Science. (2) (Same as Biomatics M262B.) Lecture, two hours; discussion, one hour. Preparation: calculus. Students interested in this certificate program should contact David Crawford, 38-232 Semel Institute, (310) 794-5715, e-mail dcrawford@mednet.ucla.edu, or see http://www.ssemel.ucla.edu/psychology/internship/

Information on clinical practicums that are offered in conjunction with other educational institutions and UCLA departments may be obtained from the department office.

Graduate Courses


M209. Introduction to Neural Networks: Modeling and Applications. (4) (Same as Biomatics CM208C.) Lecture, 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.

M210. Editorial Board Apprenticeship. (2) (Same as Health Sciences M210.) Seminar, two hours. For directed, individual contract required. P/NP or letter grading.

M214. Cross-Cultural Studies of Socialization and Children. (4) (Same as Anthropology M236P) Seminar, three hours. Students interested in this certificate program should contact David Crawford, 38-232 Semel Institute, (310) 794-5715, e-mail dcrawford@mednet.ucla.edu, or see http://www.ssemel.ucla.edu/psychology/internship/

Information on clinical practicums that are offered in conjunction with other educational institutions and UCLA departments may be obtained from the department office.

M180. Contemporary Problems in Developmental Disabilities. (4) (Same as Psychology M180.) Seminar, three hours. Corequisite: course M181. Limited to Developmental Disabilities Program students. Examination of broad spectrum of issues related to mental retardation, intelligence and IQ, genetics, neurobiology, and other developmental disabilities. P/NP or letter grading.


M182. Communication of Science. (2) (Same as Biomatics M262B.) Lecture, two hours; discussion, one hour. Preparation: calculus. Students interested in this certificate program should contact David Crawford, 38-232 Semel Institute, (310) 794-5715, e-mail dcrawford@mednet.ucla.edu, or see http://www.ssemel.ucla.edu/psychology/internship/

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Psychiatry and Biobehavioral Sciences

Upper Division Courses

M180. Contemporary Problems in Developmental Disabilities. (4) (Same as Psychology M180.) Seminar, three hours. Corequisite: course M181. Limited to Developmental Disabilities Program students. Examination of broad spectrum of issues related to mental retardation, intelligence and IQ, genetics, neurobiology, and other developmental disabilities. P/NP or letter grading.

Psychiatry and Biobehavioral Sciences

259. Legal and Ethical Issues with Vulnerable Populations. Seminar in professional health law and ethical issues affecting vulnerable populations, including children and adolescents. Course 259 is requisite for supervised evaluation and case management of various ways that power, as it is structured and enacted in everyday activities, shapes human reproductive behavior. Case materials from diverse cultures illuminate how competing interests within households, communities, states, and institutions influence reproductive arrangements in society. Letter grading.

261. Advanced Seminar: Child and Adolescent Psychopharmacology. Use of videotapes and discussion in the clinical decision-making process, given the limited scientific evidence supporting pharmaceutical practice in this field. S/U grading.

262. Clinical Pharmacology. Seminar, two hours. Preparation: completion of professional health sciences course (M.D., D.D.S., D.N.Sc., or Ph.D.). Overview of psychiatric therapeutics especially as they relate to clinical and translational medicine and to advances in contemporary medicine such as targeted, gene therapy, and genomics. Letter grading.

264. Health and Mental Health Disparities from Psychosocial and Cultural Perspectives. Seminar, two hours. Designed for graduate and medical students, resident physicians, and juniors/seniors (with consent of discipline). S/U grading.

265. Functional Neuroimaging: Techniques and Applications. Seminar, two hours. Required: course 292. Course 264 is requisite to 284B. 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, magnetoencephalography, transcranial magneto stimulation, near infrared imaging. Letter grading.

268. Anthropological Perspectives on Human Body. Seminar, four and one-half hours. Preparation: competence in integral calculus, electricity and magnetism, computer programming (any language), general statistics. Required: course 292. Course 264 is requisite to 284B. 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, magnetoencephalography, transcranial magneto stimulation, near infrared imaging. Letter grading.

280. Politics of Reproduction. Seminar, three hours. Examination of various ways that power, as it is structured and enacted in everyday activities, shapes human reproductive behavior. Case materials from diverse cultures illuminate how competing interests within households, communities, states, and institutions influence reproductive arrangements in society. Letter 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 using systematic observations, administering formal assessments, and developing and carrying out individualized educational and behavioral programs. Theoretical background, part-time five-hour weekly lecture. S/U or letter grading.

282. Anthropological Perspectives on Human Body. Seminar, four and one-half hours. Preparation: competence in integral calculus, electricity and magnetism, computer programming (any language), general statistics. Required: course 292. Course 264 is requisite to 284B. 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, magnetoencephalography, transcranial magneto stimulation, near infrared imaging. Letter grading.


M234. Affective Disorders. (2 or 4) Lecture, two hours. Preparation: completion of professional health sciences course (M.D., D.D.S., D.N.Sc., or Ph.D.). Overview of psychiatric therapeutics especially as they relate to clinical and translational medicine and to advances in contemporary medicine such as targeted, gene therapy, and genomics. Letter grading.

M261. Advanced Seminar: Child and Adolescent Psychopharmacology. Use of videotapes and discussion in the clinical decision-making process, given the limited scientific evidence supporting pharmaceutical practice in this field. S/U grading.

M262. Clinical Pharmacology. Seminar, two hours. Preparation: completion of professional health sciences course (M.D., D.D.S., D.N.Sc., or Ph.D.). Overview of psychiatric therapeutics especially as they relate to clinical and translational medicine and to advances in contemporary medicine such as targeted, gene therapy, and genomics. Letter grading.

M264. Health and Mental Health Disparities from Psychosocial and Cultural Perspectives. Seminar, two hours. Designed for graduate and medical students, resident physicians, and juniors/seniors (with consent of discipline). S/U grading.

M265. Functional Neuroimaging: Techniques and Applications. Seminar, two hours. Preparation: course 292. Course 264 is requisite to 284B. 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, magnetoencephalography, transcranial magneto stimulation, near infrared imaging. Letter grading.
M289. Intervention to Reduce HIV and Its Consequences. (4) Same as Community Health Sciences M299.) Lecture, three hours. Examination of interven-
tions to reduce HIV/AIDS transmission. Review of the-
ory and research supporting efficacy of HIV interven-
tions for variety of high-risk populations. Letter grading.

290. Los Angeles HIV-Community Colloquia. (1) Lecture, three hours. Opportunities for stu-
dents to identify and appreciate experimental neuro-
ing and research supporting efficacy of HIV interven-
tions for variety of high-risk populations. Letter grading.

291. Functional Magnetic Resonance Imaging and
Consciousness Journal Club. (1) Seminar, three hours; discussion, three hours. Opportunity for stu-
dents to identify and appreciate experimental neuro-
ing and research supporting efficacy of HIV interven-
tions for variety of high-risk populations. Letter grading.

292. Functional Neuroanatomy for Neuropsycholog-
ists. (2) Lecture, two hours. Preparation: graduate-
level neuroanatomy course. Designed for neuropsy-
chologists and other graduate students. Focus in odd-
numbered sessions on personality theory, and assign-
ed readings. Guest speakers with expertise in vari-
ces of emotional and psychological assessment and treat-
ment. Letter grading.

293. Clinical Investigation. (2) Seminars, three hours; discussion, one hour. Designed for gradu-
ate students. Introduction to initial steps in clinici-
sal research through preparation of research proposal.
Small working groups develop proposal on spe-
cific topic. S/U grading.

294. Essentials of Clinical Investigation. (2) Lecture,
two hours; discussion, one hour. Designed for gradu-
ate students. Introduction to initial steps in clinici-
sal research through preparation of research proposal.
Small working groups develop proposal on spe-
cific topic. S/U grading.

295A. Seminar in Substance Abuse I, II, III. (2-2-2) Seminar, two hours; discussion, one hour. 

course. Discussion of emerging scientific con-
nclusions and IRB issues, and (6) preparation of budgets 
for NIH grants. Letter grading.

405. Trauma and Sexual Abuse Research Seminar. 
(4) Seminar, three hours; discussion, one hour. De-
designed for graduate and medical students. Focus in even-
umbered sessions on personality theory, and assign-
ed readings. Guest speakers with expertise in vari-
ces of emotional and psychological assessment and treat-
ment. Letter grading.

407A-407B-407C. Clinical Hypnosis Seminars. (2- 
2-2) Formerly numbered 207A-207B-207C.) Seminars, two hours. Integrated, experientially oriented sequence with workshops, independent study, practice, and 
assigned readings. Guest speakers with expertise in spe-
cific hypnagogic techniques and population, and vid-
eo programs included. In-clinical and faculty members 
in healthcare providers as well as licensed health-
care providers from community (MCEP credit avail-
able) encouraged to enroll. For trainees in social work, 
psychology, and psychiatry, completion of minim-
um of year of supervised training in psychotherapy or 
behavior therapy required. S/U grading. 407A. Cultural 
and historical context for hypnosis; development of techni-
ques for induction, therapeutic alliance, countertransference, 
management, and re-alerting; and involving family 
and trance experiences. Fundamentals of trance 
utilization, including diagnosis, safety, and 
and managing hypertrance experiences. Application of 
hypnagogic techniques in specific clinical situations 
and with specific populations.

425. Teaching Case Conference. (1) Review of diag-
nosis and treatment of full spectrum of disorders, with 
expert off-unit consultants. S/U or letter grading.

429. Child Outpatient Team. (1) Weekly team 
meetings to coordinate clinical activities of trainees in Child 
Outpatient Department. Discussion of literature and 
thoretical approaches to therapy. Letter grading.

434. Seminar: Addiction Psychiatry. (1) Seminar, one 
hour. Cutting-edge information on basic and appli-
ced aspects of addiction psychiatry (neurobiology, 
pharmacology, genetics, and evidence-based medical and 
behavioral therapies) and opportunities for partici-
pants to connect with established scientists in addi-
tion research. S/U grading.

449. Parent Training Intervention Workshop. (2) Lecture, 90 minutes; discussion, one hour. Advanced 
clinical training. Techniques and practical aspects of assess-
ment and treatment of parent-child problems. Lectures, 
case presentations, and workshops on various skills 
necessary.

454. Advanced Topics in Neuropsychology. (1) Seminar, two hours; discussion, one hour. Preparation of 
theses and papers. Focus in even number of odd years 
that involve interface of neuropsychology with other disciplines, 
such as cognition and psychopharmacology, 
neuroimaging, and neuropsychological assessment, cognition and genomics, psychometrics/behavioral development. Focus in odd years on current models of human neuropsychology, 
such as models of working memory, neuropsychology of emotion and social cognition, models of implicit ver-
sus explicit learning, types of attention, and models of executive processes. S/U grading.

468. Translational Neuroscience of Drug Addic-
tion. (1) Lecture, one hour. Designed for graduate stu-
dents. Focus in odd number of 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.

479. Genetics Clinic Presentation. (No credit) Weekly clinical teaching session on patients seen in the genetics clinic. In-depth discussion on ge-
cetics of each disorder.

480. Analysis of Human Chromosome Studies. (1) 
Chromosome karyotypes prepared in cytogenetics lab-
oratory during preceding week presented and dis-
cussed with reference to clinical findings. Teaching in-
cludes interpretation of abnormal karyotypes and tech-
nical aspects of routine and special chromosome stud-
ies.

482. Clinical Practicum in Childhood Anxiety and 
Related Disorders. (3) Clinic, two hours. Training in 
cognitive/behavioral assessment and treatment of chil-
dren and adolescents with anxiety and related disor-
ers. Didactic and experiential training, including direct 
patient care, clinical supervision, and participation in 
weekly team meetings. Letter grading.

495. Human Genetics Seminar. (No credit) Semi-
inar, one hour. Preparation: introductory genetics 
course. Weekly lecture series intended for those inter-
ested in human genetics or in specific topic to be pre-
sented. Speakers are invited for their expertise or re-
search in some special area related to human genetics 
and may be from UCLA or elsewhere. No grading.

M490. Educational Advocacy. (2) Same as Law 
M431.) Clinic, two hours (12 weeks). How to provide 
educational advocacy based on IDEA, ADA, and Sec-
tion 504 of Rehabilitation Act on behalf of children with 
learning disabilities, behavior disorders, and mental re-
tardation. S/U or letter grading.

596. Individual Studies in Psychiatry. (2 to 12) Tu-
torial, to be arranged. Preparation: submission of writ-
ten 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 Semel Insti-
tute. Directed individual research and study in psychia-
try at graduate level. S/U or letter grading.

**Psychology**

*College of Letters and Science*

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J. David Jentsch, Ph.D.
Scott P. Johnson, Ph.D.
Jaana H. Juvenon, Ph.D.
Benjamin R. Kamey, Ph.D.
Philip Kellman, Ph.D., Ph.D.
Barbara Knollton, Ph.D.
Matthew D. Lieberman, Ph.D.
Donald G. MacKay, Ph.D.
Neil M. Malamuth, Ph.D.
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Thomas R. Minor, Ph.D.
Hector F. Myers, Ph.D.
Keith H. Nuechterlein, Ph.D., in Residence
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Richard A. Schmidt, Ph.D.

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 UCLA 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 UCLA 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 experiences — 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 B.A. degree in Psychology and B.S. 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 new and valuable insights into the understanding of human behavior, including their own.

At the graduate level, the department offers training leading to the Ph.D. 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

Psychology B.A.

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 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 15 or Physiological Science 3; Chemistry and Biochemistry 2 or 14A or 20A or Physics 10 or 1A or 6A; one course from Computer Science 2, 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, 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 preparation 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 introductory course to psychology, one introductory course to statistics (recommended), finite mathematics, calculus, computer science theory, or computer programming in C++.

Refer to the UCLA Transfer Admission Guide at http://www.admissions.ucla.edu/prospect/adm_tr.htm 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 133L or 161), 135, 150; (2) one laboratory/fieldwork course from 101, 111, 116, 125, 130, 155, 185A, 185B, 183A, 185C, 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 B.S.

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, computer science, linguistics, and related disciplines, 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 15 or Physiological Science 3; Chemistry and Biochemistry 2 or 14A or 20A or Physics 10 or 1A or 1A; Mathematics 31A, 31B; Philosophy 7 or 8 or 9; Program in Computing 10A, 10B, and one course from 15 or 20A or 40A; 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 at http://www.admissions.ucla.edu/prospect/adm_tr.htm 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 124J; (2) one course from 186A through 186D and one course from 121, 186A through 186D, or Computer Science 161; (3) three upper division elective courses (12 units) from Psychology 110, 112A through 116, M117J through M119X, 124A through 124J (if taken for the major, may not be applied as an elective); 130, 133B, 135, 142H, 160, 161, 187A, 191CH (if content is approved by the Undergraduate Advising Office and course has not been applied toward the Psychology 195B or 196B requirement), Computer Science 111 through CM186, Ethnomusicology 172A, Linguistics 103 through 185B, Mathematics 110A through 171, Neuroscience 102, Philosophy 124 through 136, Statistics 100A, 100B, 100C, 101B, 101C; (4) two terms of Psychology 195B or 196B (may be fulfilled by taking any
two courses from 191CH, 195B, or 196B, 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 B.S.
The Psychobiology major is designed for students who plan to go on to graduate work in physiological psychology, neuroscience, behavioral aspects of biology, or the health sciences. Psychobiology involves the study of brain-behavior relations and laboratory training in standard brain research techniques.

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 before declaring the Psychobiology premajor before students reach 150 total units. 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, 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 at http://www.admissions.ucla.edu/prospect/adm_tr.htm 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 or Anthropology 128A and 128B, 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 133L, 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, 119A through 119X, 120, 161, 186D, 191CH (only if content is approved by the Undergraduate Advising Office), Chemistry and Biochemistry 153A, 153L, Computational and Systems Biology M187, Ecology and Evolutionary Biology 100, 102, 105, 106, 110, 111, 115, 117, C119, 120, 121, 122, 124 (only 4 units may be applied toward the major), 129, 135, 164, 170, Microbiology, Immunology, and Molecular Genetics 185A, Molecular, Cell, and Developmental Biology 100, 104, 138, M140, CM156, Neuroscience 102, Physiological Science C144, 146, 147, M148, 166, 173.

Students who complete Psychology M117A, M117B, M117C receive equivalent credit for course 115 and 10 units of upper division psychobiology 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 organic chemistry with laboratory for honors students, emphasize readings in the original literature, student reports, and small group discussions, and may include field or research experience. Enrollment priority in honors courses is given to students in the departmental honors program. Consult 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 with a 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. Consult 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 Program in Computing 10A, 10B, and at least one course from 10C, 15, 20A, 30, 40A, or 60, and (3) completing at least three courses from Psychology 85, 121, 142H, 186A through 186D (one 199 course may be substituted for one of these courses provided project has been approved by vice chair). A grade of C or better is required in each course. Students graduate with a bachelor's degree in their major and a specialization in Computing. Students planning to enter this specialization should consult the Undergraduate Advising Office.

Applied Developmental Psychology Minor
The Applied Developmental Psychology minor is designed to (1) provide a coherent academic program with focus on issues central to improving the well-being of children and their families, (2) teach undergraduate students how to apply theories, research methods, and research findings to practical concerns, and (3) prepare students to join or receive further training in various child-related professions.

The minor is open to all enrolled UCLA students (including Cognitive Science, Psychobiology, and Psychology majors) who have an overall grade-point average of 2.0 or better and have been accepted into an approved applied developmental psychology internship program. For further information about applying to the internship program, contact the director of the Infant Development Program, 1615 Franz Hall, (310) 825-2896. For questions about additional course requirements for the minor, contact a counselor in the Undergraduate Advising Office, 1531 Franz Hall, (310) 825-2730.
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, 134I, 161, 198A or 198B (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 an approved daycare center/school. The internship provides hands-on experience working with young children as teacher’s aides and opportunities for observing children.

No more than two courses may be applied toward both this minor and a major in another department or program.

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, philosophy, 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.

Required Courses (28 units): Psychology 85 and one course from 15, 100B, Computer Science 2, Linguistics 1, 20.

The computer programming experience requirement is satisfied by petition based on coursework (e.g., completion of Program in Computing 10A) or other relevant programming experience.

Students must also select (with approval of the Undergraduate Advising Office) and complete one of the following four primary clusters: (1) biological basis of cognition cluster — three courses from Linguistics C135, Neuroscience 102, Psychology 115, 116, M117C (or Molecular, Cell, and Developmental Biology M175C or Neuroscience M101C or Physiological Science M180C), 119B, 119F, M119L, M119N, 160, 161; (2) computation and modeling cluster — three courses from Biomatics 108, Computer Science 161, Psychology 186A through 186D (at least one course must be from Computer Science 161, Psychology 186A through 186D); (3) human cognition cluster — Psychology 121 and two courses from 120A or 120B, 124A through 124J, 133B, 133C, 133E; (4) mind and language cluster — three courses from Linguistics 120A, 120B, 120C, 130, 132, C135, 185A, Philosophy 124, 125, 126, 127A, 127B, 129, 170, 172, Psychology 124A.

Students must also fulfill a secondary cluster requirement of two additional courses from one or more of the clusters not selected as the primary cluster.

No more than two courses may be applied toward both this minor and a major in another department or program.

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 99, 185, 192, 193, 194A through C194D, 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, 8 units of course 199 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 (PROPS) represent a vital effort to identify and mentor underrepresented minority and/or low-income students. The purpose of PROPS 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- 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 and accommodates children from three months to three years old.

UCLA Psychology Clinic

The UCLA Psychology Clinic is the Department of Psychology is a major training center for students in the clinical psychology Ph.D. 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, http://www.gdnnet.ucla.edu/
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.


85. Introduction to Cognitive Science. (4) Lecture, three hours. Exploration of computer metaphor of mind as an information-processing system, focusing especially on perception, knowledge representation, and thought based on research in cognitive psychology, neuropsychology, and artificial intelligence. May examples from various fields. 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 seminar of situations of selected topics of current psychological interest. Consult Schedule of Classes for times and instructors. May be repeated for credit.

88A. Stress, Adaptation, and Coping. Limited to freshmen/sophomores. Physiological and psychological processes related to stresses and strains of daily living and potential relation of these processes to disease states. Examination of multifaceted nature of coping with stressors and exploration of strategies for stress management. P/NP or letter grading.

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. Introduction to research methods and critical analysis in psychology. Lecture and laboratory topics include experimental and nonexperimental research methods, statistical design, and analysis as applied to a biopsychological 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, 101B. General laboratory course for psychology students to acquire key concepts in psychology through active participation in enriched environment. Use of current technologies (e.g., Web-based teaching, interactive computer demonstrations) in challenging atmosphere 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 animals and human conditioning; retention and transfer of research. In addition to overview, major topics 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. 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, 90 minutes; recitation, 90 minutes. Designed for juniors/seniors. Examination of some basic processes underlying motivated behavior, stressing environmental determinants of behavior, learning, and reproduction-related behavior. Discussion of physiological mechanisms that contribute to such behaviors. Consideration of topics such as reinforcement, acquired motivation, 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. Requisites: courses 10, 100A, 110. Recommended: course 115. Designed for juniors/seniors. Presentation of biological and behavioral approaches to fear and anxiety, taken from laboratory and applied research. Difference in 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 Depressions. (4) Lecture, two and one-half hours; discussion, 30 minutes. Requisites: courses 110 and 115, or Neuroscience M101A, M101B, 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 focused on findings from animals, as viewed from evolutionary framework concerned with natural histories of animals. 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: courses 10, 100A. Designed for juniors/seniors. Study of topics in systems and neuron systems: courses 10 and 100A, with grades of C or better. Not open for credit to students with credit for Physiological Science 111A. For Physiological Science majors only, a grade of C– or better is required to proceed to Physiological Science 111B. Cellular neuropsychopharmacology; 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 Biological M117A or Neuroscience M101A or Physiological Science M108A) or Physiological Science 111A, Life Sciences 3, 4 (a may be taken concurrently). Molecular biology of channels and receptors: focus on voltage dependent channels and neurotransmitter receptors. Molecular biology of supramolecular mechanisms: synaptic transport, cytoskeleton, and muscle. Classical experiments and modern molecular approaches in development and neurobiology. P/NP or letter grading.

M117C. Behavioral and Cognitive Neuroscience. (5) Lecture, four hours; discussion, 90 minutes. Requisite: course 115 or M117A (or Molecular, Cell, and Developmental Biological M117A or Neuroscience M101A or Physiological Science M108A) or Physiological Science 111A. Neural mechanisms underlying motivation, learning, and cognition. P/NP or letter grading.

M117J. Biological Bases of Psychiatric Disorders. (5) (Same as Molecular, Cell, and Developmental Biological M117J, Neuroscience M101A, M101B, M101C, and Physiological Science M181, and Psychiatry M181.) Lecture, three hours. Requisite: course 115 or M117A (or Molecular, Cell, and Developmental Biological M117A or Neuroscience M101A or Physiological Science M108A) or Physiological Science 111A. 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 pharmaceutical treatments. P/NP or letter grading.


119A. Neuropsychopharmacology. (4) Lecture, three hours. Requisite: course 115. Designed for junior/senior majors. Survey of brain systems and focus on the interaction of drugs with neurochemical systems to produce behaviors. 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 neuroscience and behavior. Designed to provide advanced undergraduate students with current perspectives on how complex processes of mind may be understood using neuroscientific techniques. P/NP or letter grading.


119E. Stress and Bodily Disease. (4) Lecture, three hours. Requisite: course 115. Designed for juniors/seniors. Psychobiological processes as they pertain to fight or flight responses. Link bodily diseases with psychological factors. P/NP or letter grading.
of visual processing from retina to visual cortex. The ability to image and analyze the visual world is truly remarkable. Physiology and anatomy of the nervous system and brain circuitry.

M119N. Visual System. (Same as Neuroscience M119N.) Lecture, three hours. Requisite: course 115 or Neuroscience M110A. Also listed as Psychological Science 111A. Ability to image and analyze the visual world is truly remarkable. Coverage of anatomy and physiology of visual processing from retina to visual cortex through exploration of perception, memory, and cognitive aspects of vision. P/NP or letter grading.


119P. Psychology of Sleep and Dreams. Lecture, three hours. Requisite: course 115. Designed for juniors/seniors. Review of measurement and comparison of sleep in mammals and submammalian species, circadian rhythms and circadian control of sleep, development and aging of sleep, neural and neurochemical control of sleep, effects of sleep deprivation, sleep in psychiatric disorders, human sleep disorders, and function of dreams. P/NP or letter grading.


121. Laboratory in Cognitive Psychology. Lecture, four hours. Requisites: courses 10, 100A, 100B, 120A, 120B, or 120AB. Designed for Psychology and Cognitive Science majors. Aspects of perception and cognition as they relate to learning and potential for learning technology. Basic knowledge about visual information processing and perceptual-cognitive research, knowledge representation, pattern recognition, attention, imagery, memory, representation of knowledge, language, action, decision making, thinking. P/NP or letter grading.

123A. Developmental Psychopathology. Seminar, three hours. Requisite: course 120A or 120B. Aspects of perception and cognition as they relate to learning potential for learning technology. Basic knowledge about visual information processing and perceptual-cognitive research, knowledge representation, pattern recognition, attention, imagery, memory, 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.

123B. Research Methods in Developmental Psychopathology. Laboratory, three hours; fieldwork, seven hours. Limited to departmental majors. Aspects of perception and cognition as they relate to learning potential for learning technology. Basic knowledge about visual information processing and perceptual-cognitive research, knowledge representation, pattern recognition, attention, imagery, memory, 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.

123C. Advanced Research Methods in Developmental Psychopathology. Laboratory, three hours; fieldwork, seven hours. Limited to departmental majors. Research approaches utilized by psychologists to conduct research in developmental psychopathology. Letter grading.

123D. Principles of Human Performance. (Formerly numbered Psychology 127B.) Lecture, two hours; discussion, one hour. Requisites: courses 10, 100A, 100B, 120A, or 120B. Designed for seniors. Analysis of recent 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.

124A. Principles of Human Performance. (Formerly numbered Psychology 127B.) Lecture, two hours; discussion, one hour. Requisites: courses 10, 100A, 120A, or 120B. Designed for seniors. Analysis of recent 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.

124C. Human Memory. (Formerly numbered Psychology 127B.) Lecture, two hours; discussion, one hour. Requisite: course 120A or 120B. Designed for seniors. Analysis of recent 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. Principles of Human Performance. (Formerly numbered Psychology 127B.) Lecture, two hours; discussion, one hour. Requisite: course 120A or 120B. Designed for seniors. Analysis of recent 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.

124E. Language and Cognition. Lecture, three hours. Requisites: courses 10, 120A, or 120B. Designed for seniors. Recent theories of language and cognition: nature of categories, feedback, and error detection in language and cognition; modularity; knowledge acquisition; processes and representations underlying perception, production, attention, and awareness in language and cognition. P/NP or letter grading.

124F. Thinking. Lecture, three hours. Requisite: course 120A or 120B. Analysis of experimental studies of thinking processes and their categorization from a problem solving, creativity, and related topics. P/NP or letter grading.

124G. Cognitive Aging. Lecture, nine minutes; discussion, one hour. Requisites: courses 10, 100A, 120A, or 120B. Designed for seniors. Recent facts and theories on relations between normal aging and cognition, including perception, language comprehension, memory, recognition, and formation of images of period, how modern cognitive neuroscience explains experience of watching movies, and neuropsychology of acting in movies. P/NP or letter grading.

124H. Perception, Learning, and Learning Technology. 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 and perceptual-cognitive research, knowledge representation, pattern recognition, attention, imagery, memory, 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. 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 and perceptual-cognitive research, knowledge representation, pattern recognition, attention, imagery, memory, 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.

125B. Research Methods in Developmental Psychopathology. Laboratory, three hours; fieldwork, seven hours. Limited to departmental majors. Aspects of perception and cognition as they relate to learning and potential for learning technology. Basic knowledge about visual information processing and perceptual-cognitive research, knowledge representation, pattern recognition, attention, imagery, memory, 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.

125C. Advanced Research Methods in Developmental Psychopathology. Laboratory, three hours; fieldwork, seven hours. Limited to departmental majors. Research approaches utilized by psychologists to conduct research in developmental psychopathology. Letter grading.

126. Clinical Psychology Laboratory. Laboratory, four hours. Requisites: courses 10, 100A, 100B, and 127A or 127B or 127C. Designed for departmental majors. Methods, designs, and issues in conduct of clinical psychology research. Students develop and conduct research. Content varies by instructor, with concentration on one of following: schizophrenia, mood disorders, anxiety disorders, childhood disorders, psychophysiological methods, observational methods with couples and families. Letter grading.

127A. Abnormal Psychology. (Formerly numbered Psychology 127B, 127C, or former course 127 or 128.) Study of dynamics and prevention of abnormal behavior, including neuroses, psychoses, character disorders, psychosomatic reactions, and other abnormal personality patterns. P/NP or letter grading.

127B. Abnormal Psychology: Biological Bases. Lecture, three hours; laboratory, one hour. Requisites: courses 10, 100A, 100B, and 127A, 127C, or former course 127 or 128. Study of biological substrates of abnormal cognition, behavior, and mood, with particular focus on neuroscience, genetics, physi-
127C. Abnormal Psychology: Developmental Perspectives. (4) Lecture, three hours. Require: course 10. Not open for credit to students with credit for course 127A, 127B, or former course 127 or 128. Study of development from prenatal period through adolescence and early adulthood. Clinical disorders include behavioral disorders, learning problems, depression/anxiety, and disorders of development such as autism and mental retardation. P/NP or letter grading.

129A. Personality Measurement. (4) Lecture, three hours. Require: courses 10, 100A. Rationale, methods, and context of studies dealing with problems of describing persons in terms of a limited set of dimensions. Detailed consideration of research literature dealing with a few representative personality dimensions. P/NP or letter grading.

129B. Introduction to Psychoanalysis. (4) Lecture, three hours. Require: courses 10, 100A. Development of Freud's ideas from 1895 to 1926, with emphasis on how his theory evolved from a drive-based reinforcement model to the structural theory in which unconscious fantasy plays a crucial role. Coverage of developments beyond Freud, especially work of the British school under the leadership of Klein, Winnicot, and Bim. P/NP or letter grading.

129C. Culture and Mental Health. (4) Lecture, two hours; discussion, one hour. Require: courses 10, 100A. Introduction to study of culture and human behavior in general, and culture and mental health in particular. Emphasis on cultural groups that comprise major U.S. ethnic groups (i.e., African Americans, Latinos/Chicanos, Asian Americans, and African Indians). P/NP or letter grading.

129D. Personality. (4) Lecture, three hours. Require: course 10. Survey of major topics in field of personality, including personality theory, personality assessment, and psychological and cultural dimensions of personality, learning, and motivation. P/NP or letter grading.


129F. Clinical Child: Childhood and Adolescence. (4) Lecture, two hours; discussion, one hour. Require: course 127A or 127B or 127C. Survey of child and adolescent psychology and psychotherapy from a psychoanalytic perspective. Coverage includes such conditions as anxiety disorders, depression, conduct and attention problems, eating disorders, and autism, with information on prevalence, causes, common treatments and their effects. P/NP or letter grading.

130. Developmental Psychology. (4) Lecture, three hours; discussion, one hour. Require: courses 10, 100A. Designed for juniors/seniors. Elaboration of developmental aspects of physical, mental, social, and emotional growth from birth to adolescence. P/NP or letter grading.

131. Research in Developmental Psychology. (4) Discussion, three hours; laboratory, three hours. Require: courses 10, 100A, 100B, and 130 or one course from 133A through 133I. Designed for Psychology and Cognitive Science majors. Forms of scientific writing; ethics of research; working with problems; special advantages and problems of asking developmental research questions; relevant methodologies for experimental and observational work; data analysis and data presentation options. 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 broader context of educational and social conditions/needs. Consideration of current research findings presented in applied setting. P/NP or letter grading.

133A. Adolescent Development. (4) Lecture, three hours; discussion, one hour. Require: courses 10, 100A. 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/NP or letter grading.

133B. Cognitive Development. (4) Lecture, three hours. Require: courses 10, 100A. 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/NP or letter grading.

133C. Language Development. (4) Lecture, three hours. Require: courses 10, 100A. 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/NP or letter grading.

133D. Social and Personality Development. (4) Lecture, three hours. Require: courses 10, 100A. Theory and research on social and personality development during childhood and adolescence. Topics include parental emotions, attachment, temperament, self-control, aggression, sex-typing, self-concept, moral reasoning and behavior, status and social skills, and peer group relations. P/NP or letter grading.

133E. Perceptual Development. (4) Lecture, three hours. Require: courses 10, 100A. Topics include origins and development of human perceptual abilities, origins of knowledge, and important aspects of the environment, ecological and computation- al issues in perception, research and theory about initial perceptual capacities, and some sensory foundations. P/NP or letter grading.

133F. Psychology and Education. (4) Lecture, three hours. Require: courses 10, 100A. Application of principles of cognitive development, learning, and perception to educational environments. Topics include general instructional issues, psychological and educational settings, early childhood education, and education of the disadvantaged. P/NP or letter grading.

133G. Culture and Human Development. (4) Lecture, three hours; discussion, one hour. Require: courses 10, 100A. Role of culture in human development through psychology, anthropology, 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. P/NP or letter grading.

133H. Applied Developmental Psychology. (4) Lecture, three hours. Require: courses 10, 100A, 100B. Application of developmental psychology to issues pertaining to improving well-being of children and their families. Topics include: life cycle, the child, interaction of social, and emotional development of children, developmentally appropriate practices, child care quality, role of educator/caregiver, and other related issues. Letter grading.

133I. Applied Developmental Psychology: Pre-school/School-Age. (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.


134D. Fieldwork in Applied Developmental Psychology. (2) Fieldwork, 86 hours per term. Enforced corequisite: course 134A. Designed for Applied Developmental Psychology minors. Fieldwork in advanced applications of developmental psychology to support and illustrate, in applied setting, theories and research findings presented in lecture. P/NP grading.

134F. Infant Care and Development. (4) Lecture, three hours. Require: courses 10, one course from 133 or 133B through 133I, one statistics course. Examination of methods, mentors, and philosophers that enhance development of children in context of childcare settings. Topics include issues of multiculturalism, ambivalence, role, and special needs adaptations. P/NP or letter grading.

134G. Early Childhood Curriculum. (4) Lecture, three hours; discussion, one hour. Require: courses 10, one course from 130 or 133B through 133I, one statistics course. Examination of methods, mentors, and philosophers that enhance development of children in context of childcare settings. Topics include issues of multiculturalism, ambivalence, role, and special needs adaptations. P/NP or letter grading.

134H. Child, Family, and Community. (4) Lecture, three hours. Require: courses 10, one course from 130 or 133B through 133I, one statistics course. Exploration 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/NP or letter grading.

134I. Social Psychology. (4) Lecture, four hours; discussion, one hour. Require: courses 10, 100A. Topics include origins of knowledge, and important aspects of the environment, ecological and computation- al issues in perception, research and theory about initial perceptual capacities, and some sensory foundations. P/NP or letter grading.

136A. Social Psychology Laboratory. (4) Lecture, one hour; laboratory, four hours. Require: courses 10, 100A, 100B, 135. Designed for Psychology majors. Introduction to research designs and methods 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. Require: 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. Require: courses 10, one course from 130 or 133B through 133I. Designed for Psychology majors. Survey 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 interview- ing techniques in laboratories. P/NP or letter grading.
137A. Sport Psychology. (4) Lecture, three hours. Designed for junior/senior Psychology majors. Introduction to field of sport psychology. Coverage of research and applied aspects of a range of topics, including youth sport participants as well as world-class performers.

137C. Intimate Relationships. (4) Lecture, three hours. Requisites: courses 10, 100A. Limited to juniors/seniors. Not open for credit to students with credit for former course M176. Introduction to how social scientists think about, study, and treat intimate relationships. Understanding how relationships change over time. Topics include attraction, relationship formation, conflict resolution, social support, sex, role of individual differences, and external circumstances.

M137E. Work Behavior of Women and Men. (4) (Same as Women’s Studies M137E.) Lecture, two and one-half hours. Requisite: course 10 or Women’s Studies 10. Designed for seniors. Examination of work behavior of women and men. Topics include antecedents of career choice, job findings, leadership, performance evaluation, 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 work with professionals. 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 powerholder and target of influence. Applications to such problems and issues as power and leadership in organizations, interpersonal influence and health, power and the family, loci of influence in everyday life, social power of political figures.

M138. 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.

M139. Representing Autism. (4) (Same as Disability Studies M139.) Seminar, three and one half hours. Students build critical awareness of autism as historically constructed disability and are required to move beyond solely medical or deficiency model of autism to recognize this new categorization of disability as produced by and productive of new dialogues, identities, and visions of what range of people fall into the category and how these multiple framings are in context of autism and disability intervention, policy, and theory today. Letter grading.

M140. Introduction to Study of Aging. (4) (Same as Gerontology M140 and Social Welfare M140.) Lecture, three hours. Designed for juniors/seniors. Perspectives on major features of human aging — biological, social, psychological, and humanistic. Introduction to information on aging and concepts of aging that prepare students for subsequent specialization. P/NP or letter grading.

142H. Advanced Statistical Methods in Psychology (Honors) (4) Lecture, three hours; laboratory, two hours. Requisites: courses 100A, 100B. Survey of statistical techniques commonly used in psychology, education, and behavioral and social sciences: correlation and regression, analysis of variance, and multiple regression. P/NP or letter grading.


M147A. Psychology of Lesbian Experience. (4) (Same as Lesbian, Gay, Bisexual, and Transgender Studies M147A and Women’s Studies M147A.) Lecture, two hours; discussion, one hour. Requisite: course 135. Examination and theory of psychology and women’s studies to examine various aspects of contemporary gay, bisexual, and lesbian life. Concentrations of interest may include: child-rearing, gender role socialization, 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.

150. Introduction to Health Psychology. (4) (Formerly numbered 137D.) Lecture, three hours. Requisite: course 10. Not open for credit to students with credit for former course 137D. Areas of health, illness, treatment, and delivery of treatment that can be elucidated by understanding of psychological concepts and research related to these problems. Topics include the biopsychosocial model approach and how psychological perspectives might be enlarged and extended in medical area. P/NP or letter grading.

151. Research Methods in Health Psychology. (4) (Formerly numbered 136D.) Laboratory, four hours. Requisites: courses 100A, 100B, 135. Not open for credit to students with credit for former course 136D. Requisites: course 137A, 137B, or 137D. Methodology of psychological investigation involving experimental, quasi-experimental, and nonexperimental methods. Examples and projects from health psychology. Letter grading.

160. Genetics of Human Cognition and Behavior. (4) Lecture, three hours. Requisites: courses 10, 100A, 127A or 127B or 127C. Limited to juniors/seniors. Survey of field of behavior genetics, including methods for determining genetic and environmental influences and for assessing the relative magnitudes of the effects of genes impacting these traits, as well as current knowledge of genetic contributions to cognition and behavior and disorders thereof. P/NP or letter grading.

161. Behavior and Brain Development. (4) Lecture, three hours. Requisites: courses 10, 100A. Limited to juniors/seniors. Exploration of relationship between brain development and behavior. 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.

163. Death, Suicide, and Trauma. (4) (Same as Sociology M138.) Lecture, three hours; discussion, one hour. Sociological analysis of incidence of violent death. Suicide is eighth leading cause of death in U.S. and one of the most deadly experience 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. Analysis of strength of this sociological perspective on the relation of potential of different theories to make sense of violent death, paying particular attention to forensic and medicolegal system to determine suicide and solve homicides. Re- view of historical 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.

M165. Psychology of Gender (4) (Same as Women’s Studies M165.) Lecture, three hours. Consideration of psychological literature relevant to understanding contemporary sex differences. Topics include sex role development, biological, physiological and personality differences between men and women, sex differences in intellectual abilities and achievement, and impact of gender on social interaction. P/NP or letter grading.

M172. Afro-American Woman in U.S. (4) (Same as Afro-American Studies M172 and Women’s 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 society and as members of their biological and ethnic group. P/NP or letter grading.


176. Human Motivation. (4) Lecture, three hours. Des-signed for juniors/seniors. Examination of theories of human motivation, experimental findings supporting these theories, and history of study of motivation. Topics include sociobiology, conflict, aspiration level, achieve- ment strivings, and causal attributions.

179A. Health Behavior and Health Status of Ethnic Groups: Behavioral Perspective. (4) Lecture, three hours. Requisites: course 135, 137A. Same as Psychology M181B. Limited to Developmental Disabilities Program students. Examination of broad spectrum of issues related to mental retardation, intelligence and IQ, genetics, neurobiolo- gy, and other developmental disabilities. P/NP or letter grading.


M181A. Research in Contemporary Problems in Developmental Disabilities. (4) (Same as Psychiatry M181A.) Lecture, one hour; laboratory, eight hours. Corequisite: course 135. Limited to Developmental Disabilities Program students. Research experience. In Progress grading (credit to be given only on completion of course). P/NP or letter grading.


184A-184B. Psychology Research Opportunity Program Seminars. (2-2) Seminar, 90 minutes. De- signed for juniors/seniors. Open to students participating in the Psychology Research Opportunity Program (PROPS) students undertaking supervised tutorial research in seminar setting with one or more faculty members to discuss their own undertaking or re- lated work in discipline. Led by one supervising faculty member. P/NP grading.

185. Research Practicum in Psychology. (3) Labo- ratory, seven hours. Corequisite: course C194D. Limited to juniors/seniors. Practical applications of psychol-
ogy 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 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 10, 85, 100A, 100B. Program in Computing 10A, 10B. Designed for junior/senior departmental majors. Models of cognition within framework of explanation at multiple levels of abstraction. Examples of elementary models in multiple psychological domains (e.g., visual perception, categorization, learning, reasoning, and problem solving). Types of models include neural networks and symbolic models. Lectures and discussions interwoven with computer simulations written in Matlab. P/NP or letter grading.

186B. Cognitive Science Laboratory: Neural Networks. (4) Laboratory, four hours. Requisites: courses 10, 85, 100A, 100B, Mathematics 31A, 31B, Program in Computing 10A, 10B. Designed for junior/senior departmental majors. Laboratory experience in neural network modeling of perception and cognition. Specific topics include essential neurophysiology, basic architecture, learning techniques, and application of computational models illustrated and discussed in context of models of specific perceptual and cognitive processes. Simulations written in Pascal. P/NP or letter grading.

186C. Computer-Based 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.


187A. Psychology and Law. (4) Lecture, two hours; discussion, two hours. Designed for juniors/seniors. Study of new topics on legal psychology, including suspect identification, polygraphy, and legal procedures. Outside speakers utilized in presentation of these materials. Students participate in presentations and/or discussion.

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 speakers utilized in presentation of these materials. P/NP or letter grading.

187C. Sex and Law. (4) Lecture, three hours. Limited to juniors/seniors. Explains role 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 such as those taught by visiting faculty members. Reading, discussion, and development of culminating project. May be repeated for credit. P/NP or letter grading.

188B. Special Courses in Psychology. (4) Lecture, three hours. Designed for junior/senior majors. 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 under-graduate supervision of seminar 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. Variable Topics Research Seminars: Psychology. (1) Seminar, 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 grading.

191AH-191BH-191CH. Departmental Honors Research Seminars. (2-2-2) Seminar, two hours. Enforced corequisite: course 198. Course 191AH is requisite to 191BH and 191CH. Psychology honors program students. Opportunity for development and analysis of creative ideas through individual research projects with faculty sponsor and discussion of student and faculty research presentations. Information and applications may be obtained from Undergraduate Advising Office, 1531 Franz Hall. If approved in advance by Undergraduate Office, courses 191AH-191BH-191CH count as part of the Psychology Department major. Letter grading.

192. Education Practices in Psychology. (4) Seminar, one hour. Limited to junior/senior psychology majors. Practical applications of cognitive science. Topics in teaching, research, and supervised practicum for advanced undergraduate students to assist in courses related to psychology. Students assist in preparation of materials and development of methods and strategies for faculty members and teaching assistants. Only 12 units from any combination of courses 185, 192, 194, 195, and 196 may be applied toward undergraduate degree and may 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.

193. Journal Club Seminars: Psychology. (1) Seminar, one hour. Limited to undergraduate students. Discussion of readings selected from current literature of particular field of interest and different ways of organizing and writing-up of speakers series. May be repeated for credit. P/NP grading.

194A. Internship Seminars: Psychology. (2) Seminar, two hours. Corequisite: course 195A. Study of research methods, applications, and current literature through group discussion, presentation, and papers. Research fields and topics vary by instructor. 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.

194B. Research Group Seminars: Psychology. (1) Seminar, one hour. Corequisite: course 196A (3-unit option). Limited to juniors/senior who are part of research group. Discussion of research methods and current literature field in or of research of faculty members or students. 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.

194C. Research Group Seminars: Cognitive Science. (1) Seminar, off-hour. Corequisite: course 195B (3-unit option). Limited to junior/senior Cognitive Science majors who are part of research group. Discussion of research methods and current literature in field or of research of participants. 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 any Psychology major. Individual contract required. Information and contracts may be obtained from Undergraduate Advising Office, 1531 Franz Hall. P/NP grading.

194D. Research Group Seminars: Practicum. (1) Formerly numbered 194D.) Seminar, one hour. Corequisite: course 185. May be repeated for credit. Designed for students who are part of research group that meets with graduate students. Discussion of research methods and current literature in field or of research of faculty members or students. 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. Concurrently scheduled with course C296B. P/NP grading.

195A. Community Internships in Psychology. (2) Tutorial (approved community setting), six hours. Corequisite: course 194A. Limited to juniors/seniors. Internship in applications of psychology in supervised setting. Students meet on regular basis with supervisor and provide periodic reports of their experience. 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 with supervising placement sponsor required. Information and contracts may be 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 cognitive science through internships in corporate settings. Students meet on regular basis with supervisor and provide periodic reports of their experience. 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 requirement for Cognitive Science major. Individual contract with supervising sponsor required. Information and contracts may be obtained from Undergraduate Advising Office, 1531 Franz Hall. P/NP grading.

195A. Research Apprenticeship in Psychology. (3 to 4) Tutorial, eight hours. Corequisite: course 194B. Limited to junior/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.

195B. 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 science 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 be applied toward course requirements for Cognitive Science major. Individual contract required. Information and contracts may be obtained from Undergraduate Advising Office, 1531 Franz Hall. P/NP grading.

198. Honors Research in Psychology. (2) Tutorial, two hours. Enforced corequisite: course 191AH or 191BH or 191CH. Limited to juniors/seniors and psychology 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. Information and contracts may be obtained from Undergraduate Advising Office, 1531 Franz Hall. Letter grading.

199A. Senior Project in Psychology. (4) Tutorial, to be arranged. Limited to juniors. Directed individual research under guidance of psychology faculty mentor. Capping paper required. Only one 4-unit 199 course may be taken per term. May be repeated for credit. Individual contract required. Information and contracts may be obtained from Undergraduate Advising Office, 1531 Franz Hall. P/NP grading.
larity and organization, coordinated sensory representation, language, regional functional specialization, attention, and regulation of cortical function by extracortical systems. Letter grading.

20SC. Neurotransmitters in Human Disorders of Motor and Cognitive Function. (2) Lecture, three hours. Designed for graduate students. Detailed analysis of neuromodulators and their roles in frontal areas involved in interpersonal communication processes (i.e., neurotransmitters, neuromodulators, “neuromodulators,” neurotropic agents). Discussion of their roles in normal brain physiology, followed by detailed examination of their perturbations in various disease states. Particular emphasis on current and past thinking about Alzheimer’s disease, Parkinsonism, Huntington’s disease, and Down’s syndrome dementia. Letter grading.

20SD. Clinical Psychopharmacology. (2) Lecture, three hours. Designed for graduate students. General principles of brain neurotransmitters, including synthesis, cell bodies, and release properties. Principles of drug administration and pharmacokinetics. Major classes of psychoactive drugs, animal models, and “atypical” compounds. Letter grading.

20SE. Psychobiology of Emotion and Stress. (2) Lecture, three hours. Designed for graduate students. Overview of literature on role of brain and autonomic endocrine systems in emotion and stress-related responses. Specific involvement of neurotransmitters, neuromodulators, and hormones in emotional plasticity, visceral function, and bodily diseases. Letter grading.

20SF. Physiology of Learning. (2) Lecture, three hours. Designed for graduate students. Search for an atomic loci of engrams. Cell biology of plasticity, including electrophysiological and molecular approaches. Theories of how neural circuitry might be organized to make learning possible. Letter grading.

20SG. Behavior Genetics. (2) (Not same as course 205G prior to Winter Quarter 2008.) Lecture, three hours. Designed for graduate students. In-depth analysis of principles of genetics for determining genetic and environmental influences and for locating and characterizing genes impacting these traits, as well as current knowledge of genetic contributions to behavior and disorders thereof. Letter grading.

20SK. Vision Neurobiology. (2) Lecture, three hours. Designed for graduate students. Exploration of anatomy, physiology, and computational in visual system, focusing on retinocortical system and the visual cortex, and visual performance. Letter grading.


20SM. Neuropsychology of Perception. (2) Lecture, three hours (five weeks). Designed for graduate students. Examination of neural substrates of high-level visual processing. Topics include anosognosia and characteristics of electrophysiological responses recorded in primate temporal lobe. Discussion of issues regarding neural representation. Letter grading.


202B. Instrumental Conditioning. (4) Lecture, three hours. Topics include animal learning and conditioning and application of learning principles to goal-directed action, motivational processes, and goal selection in nonhuman animals. S/U or letter grading.

206D. Fear and Anxiety. (4) Pre requisite: course 200A. Critical discussion and in-depth analysis of current major theoretical approaches to associative learning, with emphasis on recent experimental analyses of conditioning phenomena.

204A. Basic Motivational Processes. (4) Lecture, three hours. Designed for graduate students. Analysis, using behavioral systems approach, of basic motivated behavior such as feeding, drinking, foraging, and reproduction. This same approach is also applied to phenomena such as acquired motivation, reinforcement, and drug addiction. Historical survey of behavioral analyses of motivation and goal-directed behavior. S/U or letter grading.

204B. Theories of Learning. (4) Discussion, three hours. Requisite: course 200A. Critical discussion and in-depth analysis of major theoretical approaches to associative learning, with emphasis on recent experimental analyses of conditioning phenomena.

204C. Evaluative Processes. (4) Lecture, three hours. Designed for graduate psychology students. Lectures and discussion on current research in application of learning principles to clinical and social problems such as alcohol and drug abuse, aggression, fear management, mental retardation, behavioral medicine, autism/schizophrenia, etc. S/U or letter grading.

204D. Fear and Anxiety. (4) Lecture, three hours. Preparation: graduate training. Presentation of theoretical and empirical advances, from biological and behavioral perspectives, in the area of fear and anxiety. Integration of animal and human research.

205A. Cortical Plasticity and Perceptual Learning. (2) Lecture, three hours. Designed for graduate students. Examination of neural basis of perceptual learning. Overview of literature on cortical plasticity and how it relates to different forms of perceptual learning in visual, auditory, and somatosensory modalities. Review of mechanisms of neural plasticity, including features of long-term synaptic plasticity and computational models of cortical processing. Letter grading.

205B. Human Neurophysiology. (2) Lecture, three hours. Designed for graduate students. Examination of higher cognitive processes in terms of neural mechanisms that underlie them. Topics include cortical modulation, integration, and organization, coordinated sensory representation, language, regional functional specialization, attention, and regulation of cortical function by extracortical systems. Letter grading.

20SC. Neurotransmitters in Human Disorders of Motor and Cognitive Function. (2) Lecture, three hours. Designed for graduate students. Detailed analysis of neuromodulators and their roles in frontal areas involved in interpersonal communication processes (i.e., neurotransmitters, neuromodulators, “neuromodulators,” neurotropic agents). Discussion of their roles in normal brain physiology, followed by detailed examination of their perturbations in various disease states. Particular emphasis on current and past thinking about Alzheimer’s disease, Parkinsonism, Huntington’s disease, and Down’s syndrome dementia. Letter grading.

20SD. Clinical Psychopharmacology. (2) Lecture, three hours. Designed for graduate students. General principles of brain neurotransmitters, including synthesis, cell bodies, and release properties. Principles of drug administration and pharmacokinetics. Major classes of psychoactive drugs, animal models, and “atypical” compounds. Letter grading.

20SE. Psychobiology of Emotion and Stress. (2) Lecture, three hours. Designed for graduate students. Overview of literature on role of brain and autonomic endocrine systems in emotion and stress-related responses. Specific involvement of neurotransmitters, neuromodulators, and hormones in emotional plasticity, visceral function, and bodily diseases. Letter grading.

20SF. Physiology of Learning. (2) Lecture, three hours. Designed for graduate students. Search for an atomic loci of engrams. Cell biology of plasticity, including electrophysiological and molecular approaches. Theories of how neural circuitry might be organized to make learning possible. Letter grading.

20SG. Behavior Genetics. (2) (Not same as course 205G prior to Winter Quarter 2008.) Lecture, three hours. Designed for graduate students. In-depth analysis of principles of genetics for determining genetic and environmental influences and for locating and characterizing genes impacting these traits, as well as current knowledge of genetic contributions to behavior and disorders thereof. Letter grading.

20SK. Vision Neurobiology. (2) Lecture, three hours. Designed for graduate students. Exploration of anatomy, physiology, and computational in visual system, focusing on retinocortical system and the visual cortex, and visual performance. Letter grading.


20SM. Neuropsychology of Perception. (2) Lecture, three hours (five weeks). Designed for graduate students. Examination of neural substrates of high-level visual processing. Topics include anosognosia and characteristics of electrophysiological responses recorded in primate temporal lobe. Discussion of issues regarding neural representation. Letter grading.


nomic health disparities and to methodological issues faced in conducting research on these issues. Letter grading.  

220A. Social Psychology. (4) Lecture. Three hours. Designed for graduate psychology students. Intensive consideration of concepts, theories, and major problems in social psychology.  


220C. Advanced Social Psychology. (4) Lecture. Three hours. Requisite: course 220A or 220D. Review of contemporary topics and issues in social psychological research and theory.  

220D. Introduction to Social Psychology. (4) Lecture, three hours. Designed for graduate students. Introduction to theory and research in social psychology for students who are not psychology majors. Service course for graduate students in education, sociology, political science, management, public health, etc.  


222A. Interpersonal Relations. (4) Discussion, three hours. Requisite: course 222A. Critical review of theory and research on interpersonal relationships, with emphasis on friendship, dating, and marriage.  

222B. Interpersonal Influence and Social Power. (4) Seminar, three hours. Preparation: advanced social psychology course (psychological or sociological). Review of theory and research on interpersonal influence and social power, with applications to various power relationships such as supervisor/subordinate, health-care professional/patient, parent/child, teacher-student, political figures, etc. S/U or letter grading.  

222C. Psychology of Intergroup Relations. (4) Lecture, three hours. Designed for graduate students. In-depth and comprehensive exposure to major theoretical and methodological issues within domain of intergroup relations research. Approaches not simply restricted to work within psychology but across social sciences in general, including anthropology, political science, and sociology. S/U or letter grading.  

222D. Social Stigma. (4) Seminar, three hours. Introduction to classic and contemporary theory and research on interpersonal stigma whit primarily from perspective of stigmatized. Letter grading.  


226-A226B-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 and methodology discussed and critiqued in depth. S/U grading.  

M228A. Proseminar: Political Psychology. (4) (Same as History M236A and Political Science M261A.) Seminar, three hours. Introduction to political psychology as the study of interpersonal relationships, political mass attitudes, group conflict, political communication, and elite decision making.  

M228B. Seminar: Political Psychology. (4) (Same as Political Science M261A.) Discussion, three hours. Requisite: course 220A or Political Science M261A. Examination of political behavior, political socialization, racial conflict, mass political movements, and public opinion. S/U or letter grading.  

M228C. Critical Problems in Political Psychology. (4) (Same as Political Science M261E.) Discussion, three hours 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 concerning specific responses and focus on particular research topics in the field. Weekly papers, as well as a lengthy final paper, required.  

231. Psychology of Gender. (4) Seminar, three hours. Preparation: courses and background in gender 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 differences and the implications 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, physiological and endocrinological implications, radioimmunoassay (measuring hormones in blood sample), ethical issues, methodological and statistical considerations, and considerations of sexual arousal, fantasy, and sexual dysfunction therapy. Discussion-oriented, with emphasis on operationalizing predictions concerning sexuality.  

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 relations. Use of human environmental variables as environmental variables as intervening variables linking specific stimulus qualities to a variety of approach-avoidance behaviors. Individual differences and drug-induced states as these response dimensions are used to explain within-individual differences in response to same environment over time or between-individual differences to same situation. Review of literature relating interindividual environments to arousals 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.  

235. Personality. (4) Survey of cognitive, analytic, and learning theory approaches to theory of personality. Emphasis on interactions of selected concepts and related research.  

236. Interdisciplinary Relationship Science. (4) Formerly numbered 236.) (Same as Anthropology M295S, Education M297, and Sociology M270.) Lecture, three hours. Limited to graduate students. Diverse approaches to relationship science in fields of anthropology, 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 between father-child, teacher-student, sibling, peer, kin, romantic relationships, marriage, and friendships. S/U or letter grading.  


238. 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 M215.) Discussion, three hours. Recent research and theory relating personality variables (e.g., attributional styles, self-esteem) to motivations and concerns of the field, including research on the role of personality and attribution in understanding behavior. Perceived causes of outcomes in achievement and affective domains. S/U or letter grading.  

240A. Language and Cognitive Development. (4) Lecture, three hours. Preparation: background in 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 development or related topic. Designed for graduate students. Consideration of major topics and concepts, key theories, latest methods, and recent research studies. 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 to introduce new papers 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.  

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, 240C. May be taken independently and may be repeated for credit. S/U or letter grading.  

242D. Development of Language and Communication. (4) Seminar, three hours. Requisites: courses 240A, 240B, 240C. 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, 240C. 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 research on physical, cognitive, social, and psychological characteristics during second decade of life. Topics include pubertal development, changes in parent/adolescent relationships, roles of peers, identity development, high-risk behaviors, stress and coping, and school adjustment. Letter 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, aggres-
sion, sex differences, empathy, and other social behaviors; review of status of emotional behavior in personality 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, theories of prevention, treatment, assessment, modern and future developments, and input from other disciplines (ethics, law, religion, welfare systems). S/U or letter grading.

M247. Culture, Brain, and Development. (4) (Same as Anthropology M239S, Applied Linguistics M233, and Education M285.) Seminar, three hours. Designed for graduate students. Integration of knowledge across different disciplines to understand interrelations of culture, brain, and development, where development includes both human ontology and human phylogeny. S/ U or letter grading.

M248. Culture, Brain, and Development Forum. (1) (Same as Anthropology M239S, Applied Linguistics M233, Education M285, and Neuroscience M293.) Seminar, 90 minutes every other week. Interdisciplinary seminar series to provide students with exposure to current research in understanding complex relationships between culture, brain, and development. S/U grading.

249. Evaluation Research. (4) Requisites: courses 250A, 250B. Introduction to evaluation research in psychology, with emphasis on clinical, community, and social psychology applications. Survey includes policy and strategy issues, design of evaluative studies, data analysis, and utilization of findings.

250A. Advanced Psychological Statistics. (4) Review of fundamental concepts. Basic statistical techniques as applied to design and interpretation of experiments and psychological data.

250B. Advanced Psychological Statistics. (4) Advanced experimental design and planning of investigations.

250C. Advanced Psychological Statistics. (4) Lecture, three hours; discussion, two hours. Requisite: course 250A. Limited to graduate students. Review of traditional topics in correlation and regression analyses, 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) Tutorial to laboratory. Designed for graduate psychology students. Students design and conduct original research projects under supervision of instructor in charge. It is anticipated that many students will complete major projects that form the basis (normally three are 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 analysis of frequency table data. Topics include categorical univariate and multivariate distributions, independence and conditional independence, log-linear model categorical designs, and ordered categorical variables. Applications from various areas of psychology.


254A. Computing Methods for Psychology. (4) Lecture, three hours. Theory and computer coded use of MATLAB, but only basic programming knowledge assumed; prior knowledge of MATLAB required. Designed to teach basic computer methods relevant to work in experimental psychology and cognitive science. Topics include simulation/modeling, statistical data analysis, and stimulus presentation. S/U or letter grading.

255A. Quantitative Aspects of Assessment. (4) Lecture, four hours. Requisites: courses 250A, 250B. Introduction to test theory, 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 traditional issues such as 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.


256. Advanced Regression Analysis. (4) Seminar, three hours. Requisites: courses 250A, 250B. Advanced treatment of traditional topics — model comparison strategies, model assumptions, topics such as outliers, mediation, moderation, categorical variables, polynomial models, transformations, logistic regression. S/U or letter grading.

257. Multivariate Analysis with Latent Variables. (4) (Same as Sociology M202B and Statistics M242.) Lecture, three hours. Introduction to models and methods for 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, higher-order, and structural-means factor 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 cognitive psychology. Topics include Markov chains, random processes, queueing theory, information theory, frequency analysis, etc.

260A-260B-260C. Proseminars: Cognitive Psychology. (1-1-1) Presentation of research topics by students, faculty, and visiting scholars. Each course may be taken for credit. S/U grading.

260D. 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) Recommended for students interested in working with clinical populations. Designed for graduate clinical psychology students. A survey of phenomenological, theoretical, and research issues regarding the diagnostic process in clinical psychology and related areas. Topics include neural and cognitive bases of mental disorder, and the relationship between brain, cognition, and behavior. Offered with overviews of the biological, psychological, and social aspects of psychopathology, and introduction to and overview of theories of causality and etiology of mental disorder. (Same as Psychiatry M246.) Lecture, three hours. Requisites: courses 250A, 250B. Memory in clinical psychology. S/U grading.


271G. Clinical Research Laboratory. (2) Corequisites: courses 271A, 271B, 271C. Required of first-year clinical psychology students. Students design and conduct original research projects under supervision of instructor in charge. It is anticipated that many students will complete major projects that form the basis (normally three are allowed). S/U grading.

272A-272G. Advanced Clinical Psychological Methods. (4 each) Each course may be taken independently and may be repeated for credit. S/U grading.

students that covers behavior modification research and practice in clinic, school, institution, and home settings. May be taken independently for credit.

272C. Clinical Interventions for Psychological Problems of Children. (4) Seminar, three hours. Requisite or corequisite: course 401 or 451. May be taken independently for credit.

272D. Family Therapy and Research. (4) Seminar, three hours. Requisite: courses 270A, 270B, 270C. Survey of major schools of family therapy and how each applies to specific clinical cases, with 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.

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 principles and techniques. Major conceptual issues, specific techniques demonstrated and practiced by students to cover a range of adult problems such as depression, stress and anxiety, anger management, assertion problems. May be taken independently for credit.

272G. Marital Therapies. (4) Lecture, two hours; discussion, one hour; laboratory, one hour. Requisites: courses 270A, 270B, 270C, 271A, 271B, 271C. Examination of assessment and treatment approaches for relationship problems in couples. Presentation, discussion, and illustration of procedures derived from social-learning, psychodynamic, and systems theories, with relevant research findings. May be taken independently for credit.

273A-273B-273C. Professional and Ethical Issues in Clinical Psychology. (2-2-2) Lecture, one hour; discussion, one hour. Designed for graduate clinical psychology students. Year-long course sequence covering variety of 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. S/U or letter grading.

274. Health Status and Health Behaviors of Racial and Ethnic Groups. (4) Lecture; Social and Health Services 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 multidimensional 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.

276. Clinical Approaches to Children with Learning and Developmental Disabilities. (4) Lecture, four hours; discussion, one hour. Designed for Ph.D. students. Theoretical and research issues and problems related to purposes of and practices involved in assessment and correctional approaches for children learning and behavior problems. Practicum experiences to illustrate course content and provide opportunities to improve research and clinical competence. S/U or letter grading.

277. Advanced Clinical Assessment. (4) Lecture, four hours; laboratory, three hours. Designed for graduate clinical psychology students. Projective techniques, case studies, psychometrical test battery, psychopathology, and application of assessment to problems in psychotherapy. S/U or letter grading.

278. Functional Neuroimaging: Techniques and Applications. (3) (Same as Biomedical Engineering M285, Radiology 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 interpretation of functional MRI experiment. S/U or letter grading.


280. Affective Disorders. (2 or 4) (Same as Psychiatry M284.) 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 required to make a presentation or prepare a research paper. S/U or letter grading.

283. Psychopathology. (4) Lecture, three hours. Survey of dominant psychological attributes of particular forms of psychopathology, including analysis of status of various theories concerned with etiology and mediating mechanisms of personality, neurotic, schizophrenic, and affective disturbances. S/U or letter grading.


289A-289B-289C. Current Issues in Clinical Psychology. (1-1-1) Discussion, 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.


292. Biobehavioral Mechanisms of Stress and Disease. (4) Lecture, two hours; laboratory, 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 through these interactions 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. Role of social class, gender, and other psychosocial factors in accounting for disparities in physical and psychological health in racial/ethnic groups. Attention to variety of specific disorders, with focus on explanatory 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 diversity and psychology of diversity. Issues include social identity, intergroup relations, development across lifespan and across social and cultural contexts, and group disparities in health and mental health. Letter grading.

296A. Research Topics in Psychology. (1) Formerly numbered 296B.) Research group meeting, one hour. Limited to graduate students. Discussion of current literature, new ideas, methodological issues, and preliminary findings. Research presentations and opportunities for feedback on current and proposed research activity to encourage, support, and facilitate student research expertise. Assigned readings included. 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 C194D. S/U grading.

297. Issues in Social Development of Minority Children. (4) Seminar, three hours. Limited to graduate students. Critical evaluation and integration of existing research on social psychological development of minority child. Emphasis on socialization of cognitive and personality styles, with goal of empirically clarifying issues raised in this area of developmental study. S/U or letter 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 employment as teaching assistant, associate, or fellow. Letter grading.

401. Fieldwork in Clinical Psychology. (1 to 12) Fieldwork, to be arranged. Requisite: courses 271A, 271B, 271C. Students on practicum assignments are required to register for this course each term (except by consent of clinical program committee). S/U or letter grading.

402. Clinical Research Practicum. (2) Fieldwork, two hours. Faculty and graduate students who share interests discuss current literature, new ideas, methodological issues, and preliminary findings. Meetings in-
clude research presentations 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-established group to pursue specific topic of their choice that is not covered in other department courses. S/U grading.

410A-410B-410C. Clinical Teaching and Supervision. (4-4-4) Clinic, four hours. Preparation: completion of Ph.D. comprehensive examinations, advancement to candidacy or preparation for dissertation research actively under way. Study and practice of knowledge, concepts, and theories on teaching and supervision of psychological assessment. Letter grading.

410D. Directed Individual Research and Study in Psychology. (2-2-2) 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 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, 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.


429A-429B. 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 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.

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.

506. Directed Individual Research and Study in Psychology. (2 to 12) Tutorial, to be arranged. One 596 course is required during second year of graduate study, and one 596 or 599 course is required during each year following completion of qualifying examinations. One 599 course is required during each year following completion of qualifying examinations. S/U grading.

507. Individual Studies. (2 to 12) Tutorial, to be arranged. Designed primarily as preparation for Ph.D. qualifying examinations. May be required by some area committees as requisite for taking examinations. S/U grading.

519. Research for Ph.D. Dissertation. (2 to 12) Tutorial, to be arranged. Preparation: successful completion of qualifying examinations. One 599 course is required during each year following completion of qualifying examinations. S/U grading.

PUBLIC AFFAIRS
Interdisciplinary Minor
Meyer and Renee Luskin School of Public Affairs
UCLA
3357 Public Affairs Building
Box 951656
Los Angeles, CA 90095-1656
(310) 206-8866
http://www.publicaffairs.ucla.edu/content/undergraduate-programs
Fernando M. Torres-Gil, Ph.D., Chair
Faculty Committee
Randall D. Crane, Ph.D. (Urban Planning)
Alfreda P. Iglishi, Ph.D. (Social Welfare)
Mark A.R. Kleinman, Ph.D. (Public Policy)
Jonja J. Leap, Ph.D. (Social Welfare)
William B. Parent, Ph.D., ex officio (Public Affairs)
Fernando M. Torres-Gil, Ph.D. (Public Policy, Social Welfare)
Rick Tuttle, Ph.D. (Public Policy)

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 policy-makers 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
To enter the Public Affairs minor, 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 (20 units): (1) Three courses from one of the following clusters: (a) gender and multiculturalism cluster — Public Policy 120, Social Welfare 101, M104C, Urban Planning 141, M175; (b) labor and work cluster — Public Policy 141, C144, 145, 148; (c) policy studies cluster — three upper division public policy lecture/seminar courses (191A may be repeated for credit with topic change); (d) social welfare cluster — three upper division social welfare lecture courses (fieldwork and internship courses such as Social Welfare 130A and 130B may not be applied); (e) urban policy and planning cluster — three upper division urban planning lecture courses (129 may be repeated for credit with topic change); or (f) by petition, a cluster of upper division policy courses proposed by the student; (2) one elective course offered by the Luskin School of Public Affairs not used to satisfy the core or cluster requirement; (3) capstone project to be completed during the senior year that may be satisfied by one of the following: (a) Public Policy 187, (b) Political Science M191DC or M194DC, (c) Civic Engagement 105SL, or (d) by petition another upper division applied policy course that requires a substantial term paper. Fieldwork and internship courses, such as Social Welfare 130A, 130B, and Urban Planning M165, may not be applied toward the minor. No more than three of the cluster and elective courses may be from a single department, and no more than two may be from outside the school.

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
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 designed to solve identified local and national health problems and priorities, the assurance that all populations have access to appropriate 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 health services 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 30 or more units, and file a petition at the School of Public Health Student Affairs Office, A1-269 Center for the 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 Services 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 90, 91, 130, 132, M140, 180, 181, Health Services M110, C121, Public Health 53, M106, or M151. Transfer credit for any of the above is subject to school approval.

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.

Public Health Schoolwide Programs
School of Public Health
UCLA
A1-269 Center for the Health Sciences
Box 951772
Los Angeles, CA 90095-1772
(310) 825-5524
e-mail: info@ph.ucla.edu
http://www.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.

Graduate Study
Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://www.gdnet.ucla.edu/gasaalibrary/pgmqrintro.htm. 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 Public Health offers two school-wide degrees, Master of Public Health (M.P.H.) and Doctor of Public Health (Dr.P.H.), and M.S. and Ph.D. degrees in Biostatistics, Environmental Health Sciences, Epidemiology, Health Services, and Public Health (offered through the Department of Community Health Sciences). An undergraduate minor in Public Health is also offered.

Two interdepartmental degree programs — the Doctor of Environmental Science and Engineering (D.Env), housed in the Department of Environmental Health Sciences, and the Ph.D. in Molecular Toxicology — are also available.


Upper Division Courses
M106. Health in Chicano/Latino Population. (4) (Same as Chicano and Chicano Studies M106.) 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. Requisite: 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.

180SA. Current Topics in California Health Policy. (4) Lecture, four hours. Concurrent for UCLA students: Civic Engagement 180SA: for non-UCLA students: one internship course. Limited to junior/senior UC Center Sacramento Program students. Development of systematic understanding of policy analysis to help students develop their own advanced policy analysis of current California-related health policy issues, and analysis of key policy challenges facing health and health care in California’s diverse population. Offered in summer only. Letter grading.

Graduate Courses
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 School of Public Health doctoral students. Interactive seminar with focus on developing teaching materials for courses and acquisition of skills and tools that help students to become successful and innovative instructors. Active learning methodologies and competencies-based approach to instruction. S/U or letter grading.
Public Policy

Meyer and Renee Luxin School of Public Affairs

UCLA
3250 Public Affairs Building
Box 951656
Los Angeles, CA 90095-1656
(310) 825-7667, Department Office
(310) 825-0448, Admissions
fax: (310) 206-0337
fax for administrative/admissions: (310) 206-2381
e-mail: mppinfo@publicaffairs.ucla.edu
http://www.publicaffairs.ucla.edu/public-policy

Michael A. Stoll, Ph.D., Chair

Professors

Joel D. Aberbach, Ph.D.
Helmut K. Anheier, Ph.D.
Albert Carnesale, Ph.D.
Michael R. Darby, Ph.D. (Warren C. Cordner Professor of Money and Financial Markets)
Franklin D. Gilliam, Ph.D.
Neal Halfon, M.D., M.P.H.
Sanford M. Jacoby, Ph.D. (Howard Noble Professor of Management)
Matthew E. Kahn, Ph.D.
Mark A. Peterson, Ph.D.
Barbara J. Nelson, Ph.D.
Mark A.R. Kleiman, Ph.D.
Robert Dallek, Ph.D. (Howard Noble Professor of Economics 11, 143. 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. Concurrently scheduled with course CM250. Letter grading.)
Richard N. Rosecrance, Ph.D.
Neal Halfon, M.D., M.P.H., and Public Policy M.P.P./Social Welfare M.S.W.) are also offered.

Public Policy

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, economics, unemployment and training, drug policy and crime, economic development, national security, and the environment. The department offers the Master of Public Policy (M.P.P.) degree and participates in the undergraduate minor in Public Affairs. The M.P.P. degree program is designed to train professionals in both public- and private-sector policy analysis and implementation and provides coursework in such areas as microeconomics, statistics, political processes, and public and nonprofit management.

Concurrent degree programs allow students to combine study for an M.P.P. with work toward a J.D. in the School of Law, an M.B.A. in the John E. Anderson Graduate School of Management, an M.P.H. in the School of Public Health, or an M.S.W. in the Department of Social Welfare.

The undergraduate minor in Public Affairs familiarizes students with key issues of public policy. Both programs have a heavy applied orientation. For further information on the minor, see Public Affairs earlier in this section of the catalog.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://www.gdnet.ucla.edu/gasaa/library/pgmrqntro.htm. 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 (M.P.P.) degree. Four concurrent degree programs (Public Policy M.P.P./Law J.D., Public Policy M.P.P./Management M.B.A., Public Policy M.P.P./Public Health M.P.H., and Public Policy M.P.P./Social Welfare M.S.W.) are also offered.

Public Policy

Lower Division Courses

10A. Introduction to Public Policy. (4) Lecture, three hours; outside study, nine hours. An introduction to basic concepts of public policy and to administrative and policy analysis, with an emphasis on the role of the public and private sectors in American society. Letter grading.

10B. California Policy Issues. (4) Lecture, three hours; outside study, nine hours. A study of public policy issues and policies. Letter grading.

10C. Contemporary Politics. (4) Lecture, three hours; outside study, nine hours. An introduction to public policy and to administrative and policy analysis, with an emphasis on the role of the public and private sectors in American society. Letter grading.

Upper Division Courses

C101. Drug Abuse Control Policy. (4) Lecture, three hours; outside study, nine hours. An introduction to drug abuse as social problem and to drug abuse control as policy issue, with examination of both necessity and effectiveness of policies. Letter grading.

102. Imperfect Rationality. (4) Lecture, three hours; outside study, nine hours. An introduction to the role of public policy and to administrative and policy analysis, with an emphasis on the role of the public and private sectors in American society. Letter grading.

C110. Nuclear Weapons: Critical Decisions. (4) (Same as Environment M165, Honors Collegium M119, and Political Science M139B.) Lecture, three hours. Examination of critical decisions regarding nuclear weapons, including defense decisions 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.

C112. 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. Letter grading.


M116. Nuclear Weapons: Critical Decisions. (4) (Same as Environment M165, Honors Collegium M119, and Political Science M139B.) Lecture, three hours. Examination of critical decisions regarding nuclear weapons, including defense decisions 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.

CM117. Crisis Decision Making in U.S. Foreign Policy. (4) (Same as Political Science M121B.) Lecture, three or four hours; discussion, one hour (when scheduled). Recommended requisites: Political Science 120A, 127A, 137B. In-depth look at theory and practice of U.S. foreign policy-making. Assessment of decisions 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.

M118. U.S. Intelligence Agencies in Theory and Practice. (4) (Formerly numbered 118.) (Same as Political Science M120C.) Lecture, three hours; discussion, one hour. Limited to juniors and seniors. Examination of U.S. intelligence agencies from Cold War to present. Particularly in light of 9/11 and Iraq war, few organizations are more important and less understood. Course separates fact from fiction, exposing agencies to public scrutiny. How they operate in practice. Fundamentals of intelligence collection (from satellites to spies) and analytic techniques used by agencies in the practice of intelligence; performance of U.S. intelligence agencies during Cold War; and intelligence community’s ability to ethically and effectively gather intelligence; performance of U.S. intelligence agencies during Cold War; and intelligence community’s ability.
M127. Understanding Public Life Cycle. (4) (Same as Political Science M142D.) Lecture, three or four hours; outside study, nine hours. Recommended preparation: Political Science 10, 40, and one course from Economics 1, 2, 5, 11, 100, or 101. Examination of how public life is shaped by (1) economic factors and behavior of various actors — business, news media, mass public, organized interests, Congress, the president, regulatory agencies, and courts; (2) ideology, cognitive biases, and ethical reasoning. Letter grading.


144. Comparative Industrial Relations. (4) Lecture, three hours; outside study, nine hours. Requisite: course 10A. At national and international levels, historical context, case studies, and how do they relate to specific actions and decisions? How is industrial conflict structured and managed? How do we design labor relations systems in the United States? Discussion of key issues in labor and employment policy. Letter grading.

145. Labor Policies in the U.S.: Historical Perspective. (4) Lecture, three hours; outside study, nine hours. Requisite: course 10A. Insight into evolution of labor policies in the U.S. from 19th century to the present. Emphasis on major historical periods, labor policies, and their impacts. Discussion of major labor and employment laws, policies, and their impacts. Students will learn how to analyze labor policies and their impacts. Letter grading.

146. Democracy, Disobedience, and Dissent. (4) Lecture, three hours; outside study, nine hours. Requisite: Philosophy 6 or Political Science 10. Theories of political and legal obligation and their critics; justified disobedience in response to moral injustice, and social exclusion; moral and religious pluralism as argument for both obedience and dissent. Letter grading.

C147. Critical Policy Issues and Problems in Globalizing World. (4) Lecture, three hours; outside study, nine hours. To enable students to (1) think of 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 world space and history. Consider currently scheduled with course C245. Letter grading.

148. Business and Public Policy. (4) Lecture, three hours; outside study, nine hours. Requisite: course 10A. An examination of economic, political, and social factors that influence public and private sector decision making. Letter grading.

149. California Sustainable Development: Economic Perspective. (4) (Same as Environment M135 and Public Health M196.) Lecture, four hours. Examination of specific environmental challenges that California faces. Microeconomic perspective used, with special emphasis on incentives of polluters to reduce pollution and incentives of local, state, and federal government to address these issues. Focus on measurement and empirical hypothesis testing. P/NP or letter grading.

M186. Equal Rights and Unequal Education. (4) (Same as Education M186 and Political Science M144C.) Lecture, four hours. Exploration of contradictions between American beliefs about equal opportunity and racial equality and inequalities that exist in public education. Three major topics in education: (1) vehicular for-
ble evidence of mastery of subject matter required. May be repeated for credit. Individual contract required. P/NP or letter grading.

Graduate Courses

201. Principles of Microeconomic Theory I. (4) Lecture, three hours; outside study, nine hours. First course in two-term sequence (see course 204) to prepare students for economic analysis of public policy, with review of economic principles and basic microeconomic theory and policy applications. Consumer theory and demand, producer theory and supply, equilibrium of product and factor markets. Letter grading.

202. American Political Institutions and Processes. (4) Lecture, three hours; outside study, nine hours. Designed to provide background necessary to develop strategies for dealing effectively with political environments of policy and administration. Discussion of U.S. constitutional arrangements, followed by instrumental analysis of processes and implementation of policy and administration. Discussion of U.S. political, legal, and social institutions to show where the U.S. fits in among varieties of modern capitalism and demand, producer theory and supply, equilibrium of product and factor markets. Letter grading.

203. Statistical Methods of Policy Analysis I. (4) Lecture, three hours; outside study, nine hours. First course in two-term sequence (see course 206). Review of basic statistical procedures useful to policy research and analysis. Topics include descriptive statistics, expectations, univariate distribution, probability, covariance and correlations, statistical independence, random sampling, design, unbiasedness and efficiency, statistical inference, confidence intervals, and hypothesis testing. Letter grading.

204. Principles of Microeconomic Theory II. (4) Lecture, three hours; outside study, nine hours. Requisite: course 201. Second course in two-term sequence (see course 201) covering both theory and policy applications. Topics include monopoly, factor markets, general equilibrium, consumer theory, externalities, public goods, uncertainty, and intertemporal optimization. Letter grading.

205. Bureaucracy and Public Management. (4) Lecture, three hours; outside study, nine hours. Problems posed by behaviors within and by bureaucracies. Conceptual tools for comprehending organization environment in which policy analysts work; tools for understanding role of manager with such organizations. Practical suggestions for policy analyst attempting to navigate waters of bureaucracy. Theoretical analysis integrated with case studies. Letter grading.

206. Political Economy of Policy Adoption and Implementation. (4) Lecture, three hours; outside study, nine hours. Preparatory course that precedes three-term 298A, 298B, 298C sequence in which students prepare major public policy projects and papers that are drawn from examinations, course papers, and implementation and are equivalent to professional master’s theses. Papers build on prior core courses, internship experience, and policy cluster courses. Letter grading.

211. Normative Issues in Policy Analysis. (4) Lecture, three hours; discussion, one hour. Limited to graduate students. Introduction to some basic normative categories of policy analysis and addressing questions of public policy. Normative questions are those that concern whether actions, characters, or states of world are right or wrong — or, 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 raise normative concerns sooner or more urgently than others: those that go beyond matters of economic efficiency and touch on questions of human dignity, equality, justice, or national or cultural traditions. Some questions that seem to be subject to efficiency analysis raise some standards from those that are concerned with those of efficiency. Discussion of disagreement that exists over what both efficiency is and in what cases or across what dimensions it ought to govern. Letter grading.


M213. Mental Health Policy. (4) Same as Social Welfare M290M.) Lecture, three hours. Examination of evolution of social policy and services for mentally ill, with emphasis on political, economic, ideological, and sociological factors that affect views of mental illness and services they provide. S/U or letter grading.


M215. Health Policy. (4) Same as Social Welfare M290M.) Lecture, three hours. Introduction to contemporary issues in health care financing and delivery, providing a broad 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.

M216. 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. S/U or letter grading.

M218. 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, half, various data collection methods, including ethnography, interview, and survey design. Letter grading.


M220. Transportation, Land Use, and Urban Form. (4) Same as Urban Planning M252.) Lecture, three hours. Historical evolution of urban form and transportation systems, metropolitan location theory, recent trends in urban form, spatial mismatch hypoth-

M228. Leadership, Development, and Governance of Nonprofit Organizations. (4) (Same as Social Welfare M241E and Urban Planning M289.) Lecture, three hours; outside study, nine hours. Designed for graduate students. 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. Letter grading.

CM231. 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 contem- porary analytical comparison of political, social, and economic contexts influencing human resource sys- tems of selected developed countries. In addition to discussing possible frameworks for analyzing human resource systems, examination of institutions and iden- tities of labor, management, and government, and interaction of interests in contemporary labor market problems. S/U or letter grading.


233. Employment Issues in California. (4) Lecture, three hours; outside study, nine hours. Designed for graduate students. Drawing on resources of UCLA Business Forecasting Project, introduction to general features of California labor market, analysis of employ- ment fluctuations and forecasting techniques including linkages between employment fluctuations in Califor- nia and elsewhere in the country, and social issues re- lated 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 un- derstand labor markets and people in lower income distribution. Concepts include static and dy- namic labor supply, labor demand, compensating dif- ferentials, human capital, and economic models of im- migration and job creation.

C235. 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 C101. Letter grading.

237. Ethical Questions in Public Life. (4) Lecture, three hours; discussion, two hours. Introduction to moral issues that commonly arise in public life. Ethics of political roles, compromise and moral integrity, lying and deception, public service, and in defending stand on issues, power, 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 modes of performance and cultural activities in con- temporary society. Overview of relevant theories of cul- ture and their ramifications in such phenomena as con- sciousness, ideology, and identity. Empirical examina- tion of what policies have been said and done about promotion of culture in interests of various social goals. Contemporaneous trend of economic and cultural inter- secting to be subject for trend analysis. Examination of globalization and national cultural interests in depth. General debate about logic and meaning of cultural politics in contemporary society and their consequenc- es for trajectories of cultural policy at local, national, and international levels. Letter grading.

C239. Budget Politics, Social Policy, and Entitle- ment 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, with attention given both to process issues and to gaining substantive knowledge about how govern- ment really works and for developing political skills re- quired to influence resource allocation decisions. Con- current enrollment in elective courses 272C, 273, 274, 275, 276. Letter grading.

M240. Theories of Regional Economic Develop- ment I. (4) (Same as Urban Planning M236A.) Lecture, three hours; discussion, one hour. Introduction to theoretical models and concepts of policy process and oth- er forms of contact between regions, process of re- gional 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 re- gional planning theory and practice, with particular em- phasis on its development in California. Regional planning and de- velopments within Western social and political philo- sophy. Major concepts include regions and regionalism, territorial community, and social production of space. Letter grading.

242. Regional Development, Urbanization, and In- dustrial Policy. (4) Lecture, three hours; outside study, nine hours. Survey of regional development, with special reference to "new economic geography" and its relevance for formulation of local economic de- velopment policies. Letter grading.

M243. Community Development and Housing Poli- cies: Roles of State, Civil Society, and Nonprofits. (4) (Same as Social Welfare M210U and Urban Plan- ning M275.) Lecture, three hours; outside study, nine hours. Designed for graduate students. Examination of role of government agencies and community organizations. Is problem housing or economic development? Should interven- tions 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 Planning, (4) (Same as Ur- ban Planning M255.) Lecture, three hours. Examina- tion of how plans work, and operate transportation systems. Measuring system perform- ance, intelligent transportation systems, transporta- tion system demand management, parking manage- ment, right-of-way acquisition, transit policy, traffic eval- uation and management, paratransit, bicycle and pedestrian planning, transportation for elderly and dis- abled. Letter grading.

C245. Critical Policy Issues and Problems in Glo- balizing World. (4) Lecture, three hours; outside study, nine hours. To enable students to (1) think of 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 world space and history. Concurrently scheduled with course C147. 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. Emphasis on stud- ents and others interested in these issues. Considera- tion 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 classic- political theory treatments and modern research in American political behavior. Letter grading.

M247. Strategic Planning for Public and Nongovernmental Organizations. (4) (Same as Social Welfare M21F and Urban Planning M290.) Lecture, three hours; out- side study, nine hours. Designed for graduate stu- dents in the field, technical and professional skills regard- ing substantive social welfare problems at community level. This form of community practice fills niche be- tween professional and knowledge and skill set pos- sessed by agency and program administrators on one hand and by policy analysts and policymakers on oth- er. Letter grading.

M248. Toleration, Pluralism, and Diversity. (4) (Same as Political Science M216.) Seminar, three hours. Prior experience in political or legal theory help- ful. Critical examination of both abstract and historical and contemporary disputes. S/U or letter grading.

CM250. Environmental and Resource Economics and Policy. (4) (Same as Urban Planning M287.) Lecture, three hours; outside study, nine hours. Letter grading.

251. Public Budgeting and Finance. (4) Lecture, three hours; outside study, nine hours. Limited to gradu- ate 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 invest- ments. Concurrently scheduled with course C215. Students are organized into small groups to facilitate review of assigned readings and to report key informa- tion. Budgeting process. Analysis and explora- tion of budget strategy matrix outlining best practices budget strategies to use in various resources availabil- ity contexts. Letter grading.

M250. Foundations of Social Welfare Policy. (4) (Formerly numbered M221A and Urban Planning M241.) Lecture, two hours; discussion, one hour; outside study, nine hours. Nature, roles, and history of welfare institutions in dif- ferent cultures; application of different components of welfare system theory and research about welfare policies and organizational forms. S/U or letter grading.

M251. Social Policy: Family and Elderly Families. (For- merly numbered M211.) (Same as Social Welfare M290P) Lecture, three hours; outside study, nine hours. Designed for graduate students. Examination of theoretical models and concepts of policy process and application to aging policy. Analysis of decision-making processes that affect social policies. Description of his- torical development of contemporary policy. Explora- tion of current proposals and issues. Letter grading.

M256. Advanced Topics in Health Economics. (4) (Same as Social Services M249E.) Seminar, four hours. Requisites: Health Services 200A, 200B, M236. Advanced topics in health economics including topics in health eco- nomics including medical health economics, pharma- ceutical economics, and relationships between labor supply, welfare, and health. Letter grading.

M257. Medicare Reform. (4) (Same as Health Servic- es 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 retire- ment of baby-boom generation. Letter grading.

M268. Microeconomic Theory of Health Sector. (4) (Same as Health Services M266.) Lecture, four hours; discussion, two hours. Preparation: intermediate microeconomics. Requisite: Biostatistics 100A. Micro- economic aspects of healthcare system, including health insurance, substitution, choice of efficient modes of treatment, market efficiency, and competi- tion. Letter grading.

M269. Healthcare Policy and Finance. (4) (Same as Health Services M269.) Seminar, three hours; outside study, nine hours. Exploration of role of insur- ance, policies for public insurance (Medicaid and Medicare), uninsured, and health insurance reform. Examination of effects of managed care on health care delivery. Letter grading.

271. Urban Poverty, Workforce Development, and Public Policy. (4) Lecture, three hours; outside study, nine hours. Limited to graduate students. Examination of how urban labor markets function, particularly low-
and hones student analytic skills to examine these draft analytic options memos and deliver oral presentations. Examination of contemporary U.S. national security challenges and how policymakers develop approaches to address them. Exploration of Cold War practice of U.S. foreign policy-making. Assessment of U.S. foreign policymakers and final crisis simulation exercise. Concurrently scheduled with course CM117. Letter grading.

274. U.S. National Security Policy. (4) Lecture, three hours; outside study, nine hours. Required to graduate students. Examination of contemporary U.S. national security challenges and how policymakers develop strategies to address them. Exploration of Cold War legacy, development of American national security strategic doctrine, and U.S. foreign policy process from 1945 to present. Examination of broad spectrum of issues confronting today's foreign policy leaders, from threats to vital U.S. interests (WMD proliferation and counter-terrorism, regional security and economic challenges (Iraq, China), to humanitarian intervention and nation-building (Darfur, Afghanistan). Students draft analytic options memos and deliver oral presentations. Weekly role plays of foreign policymakers. Letter grading.

280A. Research and Development Policy. (4) (Same as Management M292A.) Lecture, three hours. Examination of research and development as process and analysis of goal-oriented organization. Factors affecting innovation and invention; transfer of technology; organizational and behavioral considerations; coupling of science, technology, and organizational goals; assessing and forecasting technological futures. S/U or letter grading.

280B. Growth, Science, and Technology. (4) (Same as Management M292B.) Lecture, three hours. Economic growth and change. Role of advances in science and technology, and actions of maximizing innovators and factors impinging on their behavior. How technological breakthroughs (or discontinuities) can form new industries or transform existing industries. How social trends shape major changes in existing firms in industries. S/U or letter grading.

289A-M289B. Immigration, Racial Change, and Education in 21st-Century Metropolis. (4-4) (Same as Education M289A-M289B, Political Science M287A-M287B, Sociology M280A-M280B.) 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 processes are transforming major social structures and major parts of professions. Vast economic transformations, brought about by globalization of workplace and dramatic decline of industrial employment in advanced nations, not only greatly raise stakes on creating equal opportunity but also cut off what were previously extremely important parts of intergenerational mobility. In Progress (M289A) and letter (M289B) grading.

290. Current Events in Public Policy. (4) Discussion, three hours. Advanced seminar on emerging issues in public policy. May be repeated for credit. Letter grading.

293. Privatization, Regulation, and Public Finance. (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 set of tools that can be used to analyze 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. Required to graduate students. Students attend biweekly Marschak Colloquium presentations given by leading social science experts. Analysis and discussion of research 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, cost benefit analysis, group behavior, and implementation. Case studies supplement lectures and texts. S/U grading.

297C. Public Policy Analysis Lectures. (2) Activity, two hours. Required to M.P.P. students. Venue for policy-makers, practitioners, and academics to present, discuss, and analyze current policy questions. Attending, formally analyzing, and commenting on policy presentations at these extra-curricular programs adds to pedagogical 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.

298A. Applied Policy Project I. (2) Seminar, 90 minutes; outside study, four and one half hours. Requisite: course 210. Limited to M.P.P. students. First course of year-long project 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 most relevant to their projects, develop and refine basic work plans, learn about various methods of data collection, and complete three drafts to support policy recommendations 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-semester in which students prepare major public policy projects and papers that are case studies of policy evaluation and implementation and are equivalent to professional masters 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-semester in which students complete research and report writing for their year-long projects, conduct oral presentations of their applied policy projects, and given 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.

596. Directed Studies. (2 to 8) Tutorial, to be arranged. Limited to graduate students. Individual program for selected students to permit pursuit of a subject in greater depth. S/U or letter grading.

Radiation Oncology

David Geffen School of Medicine

UCLA
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fax: (310) 794-1984
http://radonc.ucla.edu

Chairs
Michael L. Steinberg, M.D., Chair
William H. McBride, D.Sc., Vice Chair, Division of Molecular and Cellular Oncology
Patrick A. Kupelian, M.D., Vice Chair, Clinical Operations and Clinical Research
Daniel A. Low, Ph.D., Vice Chair, Division of Medical Physics

Scope and Objectives

The Department of Radiation Oncology includes clinical divisions at the UCLA Medical Plaza and Reagan UCLA Medical Center, West Los Angeles VA Medical Center, Providence Holy Cross Medical Center in Santa Clarita and Mission Hills, and Children's Hospital of Los Angeles and includes the Divisions of Brachytherapy, Clinical and Molecular 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 involve total body irradiation before bone marrow transplant-
RADIOLOGICAL SCIENCES
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http://www.radiology.ucla.edu

Chair
Dieter R. Enzmann, M.D. (Leo G. Rigler Professor of Radiological Sciences)

Faculty Committee
Carol A. Bakhos, Ph.D. (Near Eastern Languages and Cultures)
S. Scott Barchy, Ph.D. (History)
Ra’anan S. Boustan, Ph.D. (History)
Brian P. Copenhaver, Ph.D. (History, Philosophy)
Donald J. Cosentino, Ph.D. (World Arts and Cultures/Dance)
Jacqueline Deitman, Ph.D. (Near Eastern Languages and Cultures)
Lowell Gallagher, Ph.D. (English)
Nile S. Green, Ph.D. (History)
Natasha L. Heller, Ph.D. (Asian Languages and Cultures)
Kenneth Reinhard, Ph.D. (Comparative Literature, English)
Allen F. Roberts, Ph.D. (World Arts and Cultures/Dance)
Mary Nooter Roberts, Ph.D. (World Arts and Cultures/Dance)
Ronald W. Vroon, Ph.D. (Slavic Languages and Literatures)

Scope and Objectives
The medical student program in 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 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 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 further details on the Department of Radiological Sciences, see http://www.radiology.ucla.edu.

RELIATION, STUDY OF
Interdepartmental Program
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(310) 206-1356
e-mail: philcounselor@humnet.ucla.edu
http://www.religion.ucla/index.php/students/major

Ra’anan S. Boustan, Ph.D., Chair

For further details on the Department of Radiation Oncology and a listing of the courses offered, see http://radonc.ucla.edu.

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Ronald W. Vroon, Ph.D. (Slavic Languages and Literatures)

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 anticipate 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 religions. Students may wish to select this major in combination with a second major field, a minor, or related language study.

Undergraduate Study

Study of Religion B.A.

Preparation for the Major
Required: History 4; Philosophy 2; two courses from Anthropology 9, Asian 60, History 1A, 1B, 1C, 9A, 9C, 9D, M10A, 10B, 11A, 11B.

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 at http://www.admissions.ucla.edu/prospect/adm_tr.htm for up-to-date information regarding transfer selection for admission.

The Major
Required: A minimum of 14 upper division courses from the list below, of which at least four (including Study of Religion 191 and Philosophy 175) must be from Group I, at least two must be from each of Groups II and IV, and at least three must be from Group III (at least one on each of the three religious traditions listed). No more than five of the 14 may be from any one group. A course may be taken twice, on different topics, for credit toward the major where repetition is allowed by the department offering the course. Variable topics courses not listed below (e.g., History 191) may be approved by the adviser as satisfying requirements for which their content is appropriate. A maximum of two upper division courses, not listed below, in an ancient language relevant to the course of study may be applied toward the major requirements (but not the group requirements) with consent of the adviser.

Special studies courses (197 and 199) may be applied toward the major but not toward a group requirement; a maximum of 12 units, approved by the adviser, may be applied. No course for the major or preparation for the major may be taken on a P/NP grading basis.

Approved courses (courses marked with an asterisk have readings in foreign languages; see departmental course listings for requisites): Group I — Methods: Anthropology 130, 156, History 186C, Philosophy 175, Study of Religion 110, 120, 191, Theater 101A


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 upper division courses under the guidance of the sponsoring professor. The first 199 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 14 upper division courses. The program culminates in an honors thesis.
110. Religion and Violence. (4) Seminar, three hours; discussion, one hour. Exploration of capacity of religious thought and practice and its relation to other areas of theoretical 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 competing truth claims, formation of religious and secular in modernity. P/NP or letter grading.

191. Variable Topics Research Seminars: Study of Religion. (4) Formerly numbered 100. Seminar, four hours. Preparation: completion of preparation for majors and at least half of upper division courses required for major (including theory and method courses). Designed for senior majors. Seminar on central methodological issues 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.

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.

ROTC Program – Aerospace Studies

College of Letters and Science

UCLA 218 Student Activities Center
Box 951611
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William E. Peris, M.S., M.O.A., Lieutenant Colonel, Chair

Professor
William E. Peris, M.S., M.O.A., Lieutenant Colonel

Adjunct Assistant Professors
Jared A. Grady, M.B.A., Captain
Devlin L. Hart, B.S., 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 allows students to qualify for an officer’s commission in the Army, Navy/US Marine Corps, or Air Force 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. 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/US 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 provide tuition, a book allowance, fees, and a tax-free monetary allowance between $300 and $500 per month during the academic year. Applications for scholarships may be obtained at http://www.afrotc.com 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. Two-year scholarship applications may be obtained from the UCLA Aeronautics Studies Department and are considered when received.

Air Force ROTC Program

Air Force ROTC provides selected students the opportunity to develop those attributes essential to positions of high responsibility as commissioned officers 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. citizenship 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 provided meals, quarters, clothing, and travel and incidental expenses. Subjects covered at field training include junior officer training, aircraft and aircrew orientation, career orientation, sur-
vival training, base functions, Air Force environment, and physical training. POC participation requires three hours of academic class and two hours of leadership laboratory each week during the academic year. Students enrolled in the POC incur a military obligation and are paid from $450 to $500 per month during the academic year. Graduation and successful completion of the POC leads to a commission as a second lieutenant. Cadets then report to one of the challenging assignments in the Air Force.

Aerospace Studies

Lower Division Courses

Freshman-Year Courses

Z. 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. No 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, 2A, 2B, 2C. 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, 2A, 2B, 2C. Study of national security processes, regional studies, advanced leadership ethics, and Air Force doctrine. Special topics focus on military as profession, officership and professionalism. Academic program provides experience in branch of service and designated career field. Presentations are made by professionals in field. 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. At least three hours of reading and tangible evidence of mastery of subject matter required. May be repeated for credit. Individual contract required. P/NP or letter grading.

ROTC PROGRAM–MILITARY SCIENCE

College of Letters and Science

UCLA

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Shawn A. Phelps, M.A., Lieutenant Colonel, Chair

Professor

Shawn A. Phelps, M.A., Lieutenant Colonel

Adjunct Assistant Professors

Christopher Barra, Lieutenant Colonel
Christopher M. Dittami, B.S., Captain
Karense D. Foxx, Captain
Simon Y. Kim, B.S., Captain
Brian M. McDermott, B.S., Captain
Sidney S. Mendoza, First Lieutenant
William N. Ritch, B.S., Major

Scope and Objectives

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This voluntary training allows students to qualify for an officer’s commission in the Army, Navy/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. 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. The Army offers both active- and reserve-duty opportunities directly after commissioning.

Scholarships

ROTC Scholarships are awarded on a competitive basis to U.S. citizens regardless of parents’ income. Scholarships provide full tuition or housing (on or off campus) up to $10,000, a $1,200 allowance for books and fees, and a tax-free monetary allowance between $300 and $500 per month during the academic year. Applications for four-year scholarships may be obtained at http://www.armyrotc.com, by calling (310) 825-7381, or by e-mail to armymrotc@milsic.ucla.edu. Completed four-year applications should be submitted by December 31 of the year preceding college matriculation. Two- and three-year scholarship applications may be obtained from the UCLA Military Science Department and are considered when received.

Army ROTC Program

Army ROTC is a program that enables students to become officers in the U.S. Army, Army Reserve, or Army National Guard while earning a college degree. The curriculum supplements students’ academic majors by offering elective courses ranging from leadership and management to military law. Courses are augmented with leadership laboratories that stress practical skills such as first aid, land navigation, survival techniques, rappelling, military tactics, and scenario-driven leadership reaction 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, contracted ROTC cadets also receive the tiered stipend of $3,000 to $5,000 per year. Students in the program also compete for over $35,000 in merit-based scholarships provided annually by various private organizations that support the Army ROTC program. Additionally, students may work part-time as officer trainees in local Army Reserves or National Guard units through the simultaneous membership program (SMP). Contracted students can fly free on military aircraft within the continental U.S. on a space-available basis.

Students may select a branch of the Army in which to be commissioned from 16 specialty fields, including military intelligence, aviation, signal communications, finance, logistics, nursing, and engineering. Prior to completion of the ROTC program, students may request to go on active duty or serve part-time in the Army Reserves or National Guard.

Undergraduate Study

Students aspiring to become Army officers follow prescribed course sequences with the Military Science Department and a physical fitness program. Generally, the courses consist of one 2- to 4-unit course per term and physical fitness
sessions one to three times per week, depending on the participation-level requirements. The military science curriculum is divided into two parts: (1) The Basic Course, two years of lower division study during which students must complete six military science courses and (2) the Advanced Course, two years of upper division study consisting of six military science courses, one military history course, and a five-week summer camp.

Army ROTC students must satisfy the military history requirement by completing Military Science 110 or another history course approved by the chair.

Transfer students and others who were unable to enter the Basic Course can receive equivalent credit in several different ways (see Two-Year Program below).

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, Reserves, 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 years. Cadets receive an allowance for travel expenses and are paid for attendance.

The active duty obligation for those students selected to enter the Reserve’s 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 for 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.

Two-Year Program

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

2. 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 contracted 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 for understanding leadership, military, and professional ethics, and life skills such as physical fitness, nutrition, and time management. P/NP or letter grading.

12. Basic Military Leadership, (2) Lecture, one hour. Requisite: course 11. Introduction to fundamentals of leadership, Army leadership values, ethics, and counseling techniques. Foundation of basic leadership fundamentals central to commissioned officer’s responsibilities established. P/NP or letter grading.


14. Principles of Land Navigation Applicable in Maneuver, (2) Lecture, one hour; discussion, one hour. Introduction to topographic maps and aerial photographs and their relation to land navigation; conceptual linkage to basic military tactics. Topics include map coordination systems, scale and distance relationships, intersection and resection, photo interpretation, squad and platoon operations, and resource planning techniques. Introduction to new technologies, including Global Positioning Systems (GPS).

18. Modern Guerrilla Warfare, (2) Lecture, one hour; discussion, one hour. Limited to undergraduate students. Introduction to low intensity conflict and guerrilla strategies; explanation/discussion of political, economic, religious, and social factors contributing to civil unrest and/or insurgencies. Topics include nonmilitary responses, military tactics, interrelationship of military and government, psychological warfare, and civic actions.

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. Requisite: 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. Requisite: course 22. Discussion/application of team-building techniques and subordinate development, through combined lecture, discussion, and experiential learning, with additional focus on commissioned officer, branches, and Army organization. Application of counseling techniques, motivation, and consideration of ethics and values for modern leaders. P/NP or letter grading.

24. Theory of Warfare, (2) Inquiry into theory, nature, causes, and elements of warfare, with attention also to evolution of weapons and warfare.

Upper Division Courses

110. U.S. Military History, (3) Lecture, three hours; discussion, one hour. Survey of American military history from 1680 to the present. Causes of war, strategy, tactics, as well as technology and ethics, 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 operational planning and decision making. Crossroads, analysis, and written and oral presentation. Emphasis on problem solving, methodology students can use in their daily lives. Experienced exercises in goal setting and military writing style. Broad overview of life in Army. P/NP or letter grading.

132. Army Officership and Communication, (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 executing complex training operations. Counseling techniques and development of skills needed to lead various organizations. Exploration of training management, leadership skills, and development counseling techniques. P/NP or letter grading.

142. Leadership, Ethics, and Military Law, (4) Lecture, three hours; laboratory, four hours. Interactive course to enhance student understanding of organizational culture, leadership, ethics. Understanding and enhancement of leader-member relations, assessment of organizational culture and ethical climate, and how to effect change in organizations. Exploration of foundations of military law and law of war. P/NP or letter grading.

143. Officership: Professional Military Leadership, (4) Lecture, three hours; laboratory, four hours. Capstone interactive leadership course to prepare students for challenges of being commissioned officers in U.S. Army by discussing various leadership challenges and case studies. Study of military units, with specific emphasis on joint operations involving Army, Navy, Air Force, and Marine Corps assets, military operations other than war, and global war on terror. Other topics include personnel administration, management and planning, and financial planning. P/NP or letter grading.

197. Individual Studies in Military Science, (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.
The Department of Naval Science provides professional training for students leading to a reserve 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. Non-scholarship students may apply to participate as members of the midshipman battalion under the NROTC College Program and, like NROTC Scholarship students, they also receive a reserve commission at graduation. Because of the rapid development of highly technical ships 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 26 units and Marine option midshipmen 18 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 also conducts a sail training program for all Navy midshipmen. All naval science courses are open to students who are not in the program but have an 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 December 1 and March 1, respectively, 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 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. College Program students serve on active duty for a minimum of three years following graduation and commissioning.

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 cruise involves intensive midshipman training. Marine Corps option students also participate, on a limited basis, in field training exercises during the academic year.

Navy Science Minor
The Navy Science minor is designed for students who wish to augment the major they are completing in another departmental program. Navy science courses are open to all students with an interest in history, national security, foreign policy, organizational leadership, management, ethics, and the military sciences. The minor consists of a four-year core of five courses, with an additional course selected from a broad list. Students must complete the core requirements, with a grade-point average of 2.0 or better. For further information, contact Donna Tenerelli at (310) 825-9075.

Required Lower Division Courses (10 units):
- Naval Science 1B, 20A, 20B.

Required Upper Division Courses (20 units):

Each minor course must be taken for a letter grade, with a grade-point average of 2.5 or better in each. Successful completion of the minor is indicated on the transcript and diploma.

Navy 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, 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 curricu-
lum, 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. (2) Lecture, two hours. Requires for Naval Science ROTC midshipmen: course 102B. Capstone course that examines principles of leadership and ethics relevant to military leaders through study and interactive discussion of classical and contemporary source documents and case studies. 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, Koreea, 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.

SCANDINAVIAN SECTION

College of Letters and Science

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Adjunct Assistant Professor
Zoe Patrice Borovsky, Ph.D.

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 modern Scandinavian program educates students about Scandinavia through the study of its languages and literatures. The Scandinavian Section offers both undergraduate and graduate degrees in the languages and literatures of Denmark, Norway, and Sweden. Danish, Norwegian, and Swedish are mutually understandable languages, giving the student of one access to the literatures and cultures of the other two. Both undergraduate and graduate majors are expected to concentrate on one Scandinavian language, though they study the literatures of the other language areas.

Undergraduate Study

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.

Native speakers of Norwegian, Swedish, and Danish may not enroll in any language course (including courses 105, 106, 107) in the Scandinavian Section except by petition in writing to the section. Non-Scandinavian students with knowledge of one of these Scandinavian languages may not take courses in the others except by petition in writing. Petitions must include a description of the student's linguistic background and the reason for wanting to take the language course in question.

Scandinavian Languages and Cultures B.A.

Preparation for the Major

Required: Scandinavian 1, 2, 3, 4, and 5, or 11, 12, 13, 14, and 15, or 21, 22, 23, 24, and 25, or equivalent.

Transfer Students

Transfer applicants to the Scandinavian Languages major with 90 or more units must complete the following introductory courses prior to admission to UCLA: two years of either Swedish, Norwegian, or Danish.

Refer to the UCLA Transfer Admissions Guide at http://www.admissions.ucla.edu/prospect/adm_tr.htm for up-to-date information regarding transfer selection for admission.

The Major

Required: Scandinavian 105 or 106 or 107; 10 courses from the following five tracks, with at least one course in each track: (1) early Nordic literatures and cultures — Scandinavian C131, 132A, 132B, C133A, C137, 138, (2) theory, genres, and authors — Scandinavian C141A, 141C, 142A, 143C, CM144A, C145A, C145B, C146A, C147A, C147B, (3) literary periods — Scandinavian 152, 155, 156, 157, (4) Scandinavian cinema — Scandinavian 161, C163A, C166A, 166C, (5) cultural studies — Scandinavian C171, C174A, C174B, C175, and three Scandinavian 187FL courses, taken in conjunction with any upper division course applied toward the major.

As an option, four upper division courses in a related field may be taken if approved in advance by the undergraduate 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.

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
Scandinavian Lower Division Courses

1. Elementary Swedish. (4) Discussion, four hours. P/NP or letter grading.
6. Elementary Swedish: Intensive. (12) Lecture, 15 hours; laboratory, five hours. Intensive basic course in Swedish equivalent to courses 1, 2, and 3. Offered in summer only. P/NP or letter grading.
16. Elementary Danish. (4) Discussion, four hours. P/NP or letter grading.
22. Elementary Finnish. (4) Formerly numbered Old Norse Studies 15b.) Lecture, three hours. Introduction to standard language of Finland. Practice in grammar, listening, speaking, reading, and writing. P/NP or letter grading.
23. Modern Icelandic. (4) Formerly numbered Old Norse Studies 15c.) Lecture, three hours. Grammar, readings, and conversation. P/NP or letter grading.
25. Introduction to Scandinavian Literatures and Cultures. (5) Lecture, three hours; discussion, one hour. N. of credit for 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 folktale through modern novel, poem, play, short story, and film, read in English and critically discussed. Satisfies Writing II requirement. Letter grading.

Scandinavian Upper Division Courses

110. Introduction to Viking Age. (4) Formerly numbered Old Norse Studies C131.) 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) Formerly numbered Old Norse Studies 132A.) 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.
133A. Saga. (4) Formerly numbered Old Norse Studies C133A.) Seminar, three hours. Sagas are largest extant medieval prose literature texts in English, with selections from different types of Icelandic sagas. Consideration of history and society that produced these narratives. Concurrently scheduled with course C233A. Letter grading.
131. Ancient Vikings and the Northern Tradition. (4) Formerly numbered Old Norse Studies C131.) Seminar, three hours. History of Viking Age society. Readings draw on medieval sagas and other primary material, as well as secondary material, focus on impact of Viking Age on northern Europe, and consider ways in which European and Scandinavian societies evolved in response to Viking incursions. P/NP or letter grading.
134. Nordic Poetry. (4) Formerly numbered Old Norse Studies C134.) Lecture, three hours. Study of poetry within following contexts: role(s) poetry has served in Nordic societies from prehistory to modern times; and special status of poetry in preserving Nordic languages and literatures, as indicated by financial support from Nordic states and publishers of contemporary poets and their poetry. P/NP or letter grading.
135. 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 Norwegian and Danish drama as a whole, as well as important contributions of their contemporaries and successors. Readings include plays, letters, speeches, and memoirs with works by authors such as Hans Christian Andersen, Jens Peter Jacobsen, Alexander Kielland, Amalie Skram, Sigbjørn Obstfelder, Knut Hamsun, Isak Dinesen, and Rubin Pimax. Emphasis on key plays and oeuvres, larger Nordic-European literary movements of 19th and 20th centuries, and tropes and conventions of short stories themselves. P/NP or letter grading.
141. Short Story in Scandinavian. (4) Seminar, three hours. Exploration of range of classic short story and novel texts from Scandinavian literature, with stories by authors such as Henrik Ibsen and August Strindberg.
143. Nordic Drama and the Modernity of Locating Texts. (4) Formerly numbered Old Norse Studies C143.) Seminar, three hours. Continue with works by authors such as Henrik Ibsen and August Strindberg. Study of modernist, postmodernist, and contemporary works, with major works in translation. Readings include plays, letters, speeches, and memoirs with works by authors such as Henrik Ibsen and August Strindberg.
144. Modern Scandinavian Drama. (4) Formerly numbered Old Norse Studies C144.) Seminar, three hours. Continue with works by authors such as Henrik Ibsen and August Strindberg. Study of modernist, postmodernist, and contemporary works, with major works in translation. Readings include plays, letters, speeches, and memoirs with works by authors such as Henrik Ibsen and August Strindberg.
145. Henrik Ibsen. (4) Formerly numbered C145.) Seminar, three hours. Readings and discussion of selected plays by Henrik Ibsen. May be concurrently scheduled with course C245A. P/NP or letter grading.
146B. Knut Hamsun. (4) Formerly numbered C146B.) Seminar, three hours. Readings and discussion of selected works by Knut Hamsun and other 19th- and 20th-century Scandinavian writers who explored themes of nature as modernity. May be concurrently scheduled with course C245B. P/NP or letter grading.
147A. August Strindberg. (4) Formerly numbered C147A.) Seminar, three hours. August Strindberg’s portrayal of marital conflict reflected in and shaped literary representations 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/NP or letter grading.
148. Hanson Christian Andersen. (4) Formerly numbered C148.) Lecture, two hours; discussion, one hour. Study of works of Hans Christian Andersen, Danish novelist, dramatist, and writer of tales, including con-
sideration of his literary background and of his times. Analysis of his works in terms of their structure, style, and narrative techniques. P/NP or letter grading.

C147B, Soren Kierkegaard. (4) Formerly numbered C146.) Seminar, three hours. Readings and discussion of selected works by Soren Kierkegaard and other existentialist writers. May be concurrently scheduled with course C147A. P/NP or letter grading.


152FL. Backgrounds in Scandinavian Literature. (2) Formerly numbered 141FL.) Seminar, two hours. Requisite, course 5 or 15 or 25. Enforced corequisite: course 152. Additional work in Nordic languages to augment work assigned in course 152, including reading, writing, and other exercises in Danish, Icelandic, Norwegian, or Swedish. P/NP 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. Focus on development of Romanticism in literature and story, including study of the work of individual writers.

155. Modern Breakthrough. (4) Formerly numbered 142.) Seminar, three hours. Readings and discussion of selected works from Romantic, realistic, and post-Romantic literature of Scandinavia in 19th century. P/ NP or letter grading.

156. Scandinavian Literature of 20th Century. (4) Formerly numbered 143.) Seminar, three hours. Readings and discussion of selected works of modern Scandinavian literature from beginning of century to present. P/NP or letter grading.

156FL. 20th-Century Scandinavian Literature. (2) Formerly numbered 143FL.) Seminar, two hours. Requisite: course 5 or 15 or 25. Enforced corequisite: course 155. Additional work in Nordic languages to augment work assigned in course 156, including reading, writing, and other exercises in Danish, Icelandic, Norwegian, or Swedish. P/NP or letter grading.

157. Contemporary Nordic Literature. (4) Formerly numbered 157.) Seminar, three hours. Reading and analysis of selected texts by major 20th-century Swedish authors. P/NP or letter grading.

161. Introduction to Nordic Cinema. (4) Formerly numbered 161.) Seminar, three hours. Reading and viewing of selected films by directors of different nationalities and genres, including films of Scandinavian directors such as David Bordwell, Ray Carney, Paul Schrader, and Ingmar Bergman. Students will read critical essays and view films in three languages. P/ NP or letter grading.

162A. Introduction to Danish Cinema. (4) Formerly numbered 162A.) 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 centered approach to development of cinema in Denmark rather than focus on films of particular directors or topics. Theoretical readings from important critics, including Kracauer, Bazin, Metz, and Chatman, along with several directed exercises, to develop vocabulary and critical method for discussing films in general and Danish cinema in particular. Exposes students to a range of filmmakers and themes, including Hjort, Sandberg, Tangherlini, and other Scandinavian theoreticians. Concurrently scheduled with course C263A. P/ NP or letter grading.

163B. Introduction to Swedish Cinema. (4) Lecture, three hours. Reading and exploration of history of Swedish cinema from silent era to present. Filmmakers include auteurs in international canon, such as Victor Sjostrom, Mauritz Stiller, and Ingmar Bergman, as well as key Swedish filmmakers such as Gustaf Molander, Alf Sjoberg, Mai Zetterling, Vilgot Sjoman, Jan Troell, Lukas Moodysson, and Jesper Christensen. Development of Scandinavian high art cinema and popular genres such as rural romanticism, melodrama, crime, and documentary. All films have English subtitles. Concurrently scheduled with course C263B. P/NP or letter grading.

C163C. Introduction to Norwegian Cinema. (4) Seminar, three hours. Introduction to and exploration of history of Norwegian cinema. Focus on popular genres such as war films, horror, noir, romantic comedies, and documentaries. Concurrently scheduled with course C263C. P/NP or letter grading.

C165A, Ingmar Bergman. (4) Formerly numbered 165A.) Seminar, three hours. Focus on 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, international 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 C265A. P/NP or letter grading.

165C. Carl Dreyer. (4) Seminar, three hours. Carl Theodor Dreyer (1889 to 1988) is not only one of great masters of Norwegian cinema, but one of world cinema’s most poetic. 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 with multiple genres in the film industry, transnational European cinema, and issues of auteur filmmaking. Readings by key Dreyer scholars such as David Bordwell, Ray Carney, Paul Schrader, Mark Sjoback, and Harold Scheit as Dreyer’s own writings on cinema. All films have English intertitles or subtitles. P/NP or letter grading.

166FL, Ingmar Bergman. (2) Seminar, two hours. Requisite: course 5 or 15 or 25. Enforced corequisite: course 166A. Critical analysis of a number of Bergman films. Concurrently scheduled with course 166A, including reading, writing, and other exercises in Danish, Norwegian, or Swedish. P/NP or letter grading.

C171. Introduction to Scandinavian Folklore. (4) Formerly numbered C178.) Seminar. Three hours. Introduction to fairy tales and legends of Scandinavian tradition as well as to interpretive methodologies that strive to answer questions of how people tell stories that they tell? Concurrently scheduled with course C271. Letter grading.

173A. Popular Culture in Scandinavia. (4) Seminar, three hours. Requisite: course 5 or 15 or 25. Popular culture in Scandinavia through study of contemporary Scandinavian literature, film, music, and art. Investigation of how issues such as globalization, immigration, and nationalism affect 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 art. P/NP or letter grading.

C174A. Minority Cultures in Scandinavia. (4) Seminar, three hours. Exploration of emergence of immigrant cultures in Nordic countries. Beginning in 1960s, large numbers of people from Turkey, Italy, and Pakistan began immigrating to Nordic countries, followed in subsequent decades by immigrants from former Soviet Union, Vietnam, Caribbean, China, 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 voices in Nordic cultural landscape in wide range of cultural expressive media, including literature, film, and visual and performing arts. Examines changing contours of new forms of Nordic languages, such as well-documented phenomenon of Rinkesby Swedish. Concurrently scheduled with course C274A. P/NP or letter grading.

174B. Queer Scandinavia. (4) Formerly numbered 174B.) Seminar, three hours. Reading and discussion of selected works that explore the history of homosexuality in Scandinavia, including readings from important critics, including Kracauer, Bazin, Metz, and Chatman. Focus on critical approach to understanding of work of this most personal of filmmakers within multiple frameworks of postwar Swedish film industry, international 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 C265A. P/NP or letter grading.

175. Introduction to Sami Language and Culture. (4) Formerly numbered C163E.) 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 a variety of common 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 C275. P/NP or letter grading.

180. Literature and Scandinavian Society. (4) Seminar, three hours. Reading and discussion of important written works by major Nordic and other Scandinavians. Limitations now characterized by broad cultural diversification 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 C280. P/NP or letter grading.

C185. Seminar: Scandinavian Literature. (4) Seminar, three hours. Requisite: course 5 or 15 or 25. Students may be concurrently enrolled in affiliated main course. Additional work in Nordic languages (Danish, Swedish, Norwegian, Icelandic) to augment work assigned in main course, including reading, writing, and other exercises. May be repeated for credit. P/NP or letter grading.

197. Individual Studies in Scandinavian. (2 to 4) Tutorial, three hours. Limited to juniors/seniors. Individual intensive study with scheduled meetings to be arranged between faculty member and student. Assignments, readings, and assessments are determined by subject matter required. May be repeated for credit. Individual contract required. P/NP or letter grading.

187FL. Special Studies: Readings in Scandinavian. (2) Seminar, two hours. Requisite: course 5 or 15 or 25. Students must be concurrently enrolled in affiliated main course. Additional work in Nordic languages (Danish, Norwegian, Swedish) to augment work assigned in main course, including reading, writing, and other exercises. May be repeated for credit. P/NP or letter grading.

187. Directed Research in Scandinavian. (4) Formerly numbered Old Norse Studies 199.) Tutorial, three hours. Limited to junior and senior Scandinavian majors. May be repeated for credit. Individual contract required. P/NP or letter grading.

Graduate Courses

C231. Introduction to Viking Age. (4) Formerly numbered Old Norse Studies C231.) Lecture, three hours. History, society, and culture of early Scandinavians. All texts in English, including readings in Old Norse sagas and Edda. Concurrently scheduled with course C131. Graduate students do additional reading, write more extensive research papers. Letter grading.

C233A. Saga. (4) Formerly numbered Old Norse Studies C233A.) Seminar, three hours. Sagas are largest extant medieval prose literature. Texts in English, with selections from different types of Icelandic sagas. Consideration of history and society that produced these narratives. Concurrently scheduled with course C133A. Graduate students do additional readings and write more extensive research papers. Letter grading.

233B. Advanced Old Norse Prose. (4) Formerly numbered Old Norse Studies 221.) Lecture, three hours. Requisite: course 132B. Readings of major saga texts. Also, second-semester focus on specific issues in Old Norse literature and medieval Scandinavian history. S/U or letter grading.

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235A. Advanced Old Norse Poetry. (4) (Formerly numbered Old Norse Studies 222.) Lecture, three hours. Readings of mythological and heroic poems from Pòetic Edda. Secondary sources used where appropriate. S/U or letter grading.

C237. Old Norse Literature and Society. (4) (Formerly numbered Old Norse Studies 222.) Seminar, three hours. Critical issues in medieval Scandinavian studies. May be repeated for credit. Concurrently scheduled with course C137. Graduate students do additional hour each week and write research papers of greater length and depth. S/U or letter grading.

C241A. Theory of Scandinavian Novel. (4) (Formerly numbered C266.) Seminar, three hours. Preparation: advanced knowledge of one Scandinavian language. 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 to novel currently scheduled with course C141A. Graduate students may meet as group one additional hour each week and write research papers of greater length and depth. S/U or letter grading.

C245A. Henrik Ibsen. (4) (Formerly numbered C251.) Seminar, three hours. Preparation: advanced knowledge of one Scandinavian language. Readings and discussion of selected plays by Henrik Ibsen. May be concurrently scheduled with course C145A. Graduate students may meet as group one additional hour each week and write research papers of greater length and depth. S/U or letter grading.

C245B. Knut Hamsun. (4) (Formerly numbered C254.) Seminar, three hours. Preparation: advanced knowledge of one Scandinavian language. Readings and discussion of works by Knut Hamsun and other 19th- and 20th-century Scandinavian writers who explored theme of nature as modern idyll. May be concurrently scheduled with course C145B. Graduate students may meet as group one additional hour each week and write research papers of greater length and depth. S/U or letter grading.

C246A. August Strindberg. (4) (Formerly numbered C252.) Seminar, three hours. Preparation: advanced knowledge of one Scandinavian language. August Strindberg’s portrayals of marital conflict reflected and shaped literary representation of so-called battle of sexes. His work, as well as its literary transformations, analyzed in historical, theoretical, sociological, critical, and comparative contexts. May be concurrently scheduled with course CM144A. Graduate students may meet as group one additional hour each week and write research papers of greater length and depth. S/U or letter grading.

C245A. Henrik Ibsen. (4) (Formerly numbered C251.) Seminar, three hours. Preparation: advanced knowledge of one Scandinavian language. Readings and discussion of selected plays by Henrik Ibsen. May be concurrently scheduled with course C145A. Graduate students may meet as group one additional hour each week and write research papers of greater length and depth. S/U or letter grading.

C263A. Introduction to Danish Cinema. (4) Seminar, three hours. Introduction to and exploration of history of Norwegian cinema from silent era to present. Film-makers include Tancred Ibsen, Arne Skouen, Edith Carlmar, Nils Gaup, Erik Skjoldbjerg, Bent Ham- mer, Khalid Hussain, and Petter Næss. Particular focus on popular genres such as war films, horror, noir, ro- mantic comedies, and documentaries. Concurrently scheduled with course C163A. S/U or letter grading.

C266. Seminar: Scandinavian Literature. (4) Semi- nar, three hours. Preparation: reading knowledge of a Scandinavian language. Selected topics in Scandan-avian prose, poetry, and drama for credit with consent of instructor and graduate adviser. May be concurrently scheduled with course C185. S/U or letter grading.

C266A. 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 influential Swedish filmmaker as well as other key Swedish filmmakers such as Gustaf Molander, Alf Sjöberg, Mai Zetterling, Vilgot Sjöman, Jan Troell, Lukas Moodyson, and Joel Sayre. Development of Scandinavian high art cinema and popular genres such as rural romanticism, melodrama, sex, crime, and horror. All films have Eng- lish subtitles. Concurrently scheduled with course C166B. S/U or letter grading.

C263C. Introduction to Norwegian Cinema. (4) Seminar, three hours. Introduction to and exploration of history of Norwegian cinema from silent era to present. Film-makers include Tancred Ibsen, Arne Skouen, Edith Carlmar, Nils Gaup, Erik Skjoldbjerg, Bent Ham- mer, Khalid Hussain, and Petter Næss. Particular focus on popular genres such as war films, horror, noir, ro- mantic comedies, and documentaries. Concurrently scheduled with course C163C. S/U or letter grading.

C265. Seminar: Scandinavian Literature. (4) Semi- nar, three hours. Preparation: reading knowledge of a Scandinavian language. Selected topics in Scandan-avian prose, poetry, and drama for credit with consent of instructor and graduate adviser. May be concurrently scheduled with course C185. S/U or letter grading.

C266A. 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 influential Swedish filmmaker as well as other key Swedish filmmakers such as Gustaf Molander, Alf Sjöberg, Mai Zetterling, Vilgot Sjöman, Jan Troell, Lukas Moodyson, and Joel Sayre. Development of Scandinavian high art cinema and popular genres such as rural romanticism, melodrama, sex, crime, and horror. All films have Eng- lish subtitles. Concurrently scheduled with course C166A. S/U or letter grading.

C270. Seminar: Literary Theory. (5) (Same as Comparative Literature M294, East Asian Languages M251, English M270, Modern Japanese M270, Modern Korean M270, Modern Chinese M270, and East Asian Languages and Cultures M471.) 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. For credit, S/U grading.

C271. Introduction to Scandinavian Folklore. (4) (Formerly numbered C267.) Seminar, three hours. Preparation: advanced knowledge of one modern Scandinavian language. Fairy tales and legends of Scandinavian tradition as well as to inter- pretive methodologies that strive to answer question “why do people tell stories that they tell?” Concurrently scheduled with course C171. Letter grading.

C271. Study of Oral Tradition: History and Meth- ods. (4) (Same as English M205A.) Seminar, three hours. Exploration of scholarly and literary attempts to study, define, analyze, promote, and/or appropriate oral traditions, from Greco-Roman or- igin in vernacular literatures, European romantic (re)discovery of oral tradition, 20th-century heuristic models of oral composition, and modern-day electronic media and popular verbal genres, such as folklor and rapping, S/U or letter grading.

C272. Collecting Oral Tradition. (4) (Same as Eng- lish M205B.) Seminar, three hours. Description and evaluation of various modern approaches to collecting and documenting oral tradition as text, performance, and sociocultural event. Consideration of approaches ranging from written transcription and textualization to audio and video recording, and S/U or letter grading.

C273. Studies in Oral Traditional Genres. (4) (Same as English M206C.) Seminar, three hours. Ex- ploration in depth of variety and history of, and scholar- ship on, a particular oral traditional genre (e.g., ballad, song, epic, proverb, riddle, folktale, legend) or a set of closely related oral traditional genres. S/U or letter grading.

C274A. Minority Cultures in Scandinavia. (4) Semi- nar, three hours. Exploration of emergence of immi-grant cultures in Nordic region. Beginning in 1960s, large numbers of people from Turkey, Italy, and Paki- stan 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 previ- ously marked by relatively high degree of cultural ho- mogeneity now characterized by broad cultural diversi- ty. Examination of emergence of new voices in Nordic cultural landscape in wide range of cultural expressive media, including literature, film, and visual and perform- ing arts. Exploration of emergence of new forms of Nordic languages, such as well-documented phenomen- on of Rinkeby Swedish. Concurrently scheduled with course C174A. S/U or letter grading.

C275. Introduction to Sami Language and Culture. (4) (Formerly numbered C266.) Lecture, three hours. Use of thematically arranged, structurally graduated readings, conversation topics, individual and group as- signments, and journal writing to provide systematic overview of linguistic characteristics of Estonian lan- guage. At course end students should be able to com- municate in Sami in variety of common social situa- tions and should be equipped with necessary basic concepts to continue language acquisition and cultural studies in their social and professional milieu, interact- ing with native speakers, or taking formal courses at in- termediate level. Concurrently scheduled with course C175. S/U or letter grading.

C280. Literature and Scandinavian Society. (4) (Formerly numbered C263.) Seminar, three hours. De- signed for graduate students. Discussion of selected aspects of Scandinavian society based on readings of contemporary literature as well as historical and/or so- cial-cultural material. May be repeated for credit (as de- termined by graduate adviser) with topic change. May be concurrently scheduled with course C180. Gradu- ate 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) Semi- nar, 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 6) Tutorial, to be arranged with faculty member who di- rects the study or research. Limited to graduate Scan- dinavian studies. Twelve units may be applied toward total course requirement, but only 4 units may be ap- plied toward minimum graduate course requirement. May be repeated twice. S/U or letter grading.

597. Preparation for M.A. Comprehensive Examina- tion or Ph.D. Qualifying Examinations. (4 to 8) Tutorial, to be arranged with faculty member who di- rects the study or research. May be repeated once. May not be applied toward M.A. minimum course re- quirements. S/U grading.

599. Research for and Preparation of Ph.D. Disserta- tion. (4) Tutorial, to be arranged with faculty member who directs the study or research. May be repeated by S/ U grading.
SLAVIC LANGUAGES AND LITERATURES

College of Letters and Science

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Edward Denzler, M.A., Emeritus

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Susan C. Kresin, Ph.D.
Ganna Kudyma, Ph.D.
Viktorija Lejko-Lacan, Ph.D.

Scope and Objectives

The Department of Slavic Languages and Literatures offers a wide array of courses in the languages and cultures of Russia and of central and eastern Europe. Instruction is offered in Czech, Hungarian, Polish, Romanian, Russian, Serbian/Croatian, and Ukrainian to provide the necessary linguistic skills to pursue advanced work in the literature, culture, history, politics, and social structures of these areas. Students have the choice of several majors and minors and the opportunity to enhance their knowledge and skills through programs of study abroad.

The department offers two majors in Russian. The Russian Language and Literature major is designed to provide students with basic mastery of the Russian language and familiarity with the classics of Russian literature. Students typically begin to study Russian in their first year, but those contemplating a Russian major later in their academic program can fulfill the Russian language requirement by combining regular coursework with summer programs or with the University of California Education Abroad Program (EAP) in Moscow, which is open to students who have completed the equivalent of one or more years of study (level 1 on the American Council on Teaching of Foreign Languages — ACTFL — scale). Students interested in this program should consult the undergraduate adviser as early as possible.

The major in Russian Studies is designed for students who wish to complement mastery of the language with an array of courses on Russian history, politics, literature, and culture.

The major in Central and East European Languages and Cultures is designed to provide students with a mastery of two languages of central or eastern Europe and familiarity with the literatures, as well as general background in the cultural, political, and social history of the Slavic peoples.

The graduate program provides advanced training in Slavic literatures and linguistics leading to the M.A. and Ph.D. degrees. The primary task of the department faculty is to develop and refine the critical and analytic skills of its students in preparation for productive careers in college teaching and research in the Slavic field. Alternative careers include language teaching, business, translation, interpreting, librarianship, and government service.

Undergraduate Study

The department offers three majors: (1) Central and East European Languages and Culture, (2) Russian Language and Literature, and (3) Russian Studies. The equivalent of a major in Central and East European Languages and Culture or Russian Language and Literature is normally required for admission to the department's graduate program and is used to determine the number of courses in Russian literature and/or linguistics that students majoring in Russian Studies are expected to make up in order to receive graduate degrees in the department. Students not majoring in Central and East European Languages and Culture or Russian Language and Literature who intend to pursue graduate study in the department are strongly encouraged to take courses in Russian literature and linguistics during their undergraduate years to reduce the number of makeup courses required. Qualified seniors may also take graduate courses numbered below 220 with consent of the instructor and the graduate and undergraduate advisers.

Central and East European Languages and Cultures B.A.

Preparation for the Major

Required: Central and East European Studies 91 or Slavic 90.

Transfer Students

Transfer applicants to the Central and East European Languages and Cultures major with 90 or more units must complete the following introductory course prior to admission to UCLA: one culture, history, or civilization course on one or more European nations.

Refer to the UCLA Transfer Admission Guide at http://www.admissions.ucla.edu/prospect/adm_tr.htm for up-to-date information regarding transfer selection for admission.

The Major

Required: Eleven courses (44 to 47 units), including (1) three Russian language courses selected from Russian 100A, 100B, 100C, 101A, 101B, 101C, 102A, 102B, 102C, 103A, 103B, 103C, 123, 130A, 140A; (2) humanities or fine arts courses numbered above 100, (3) foreign language or civilization course numbered above 100, and (4) at least two courses numbered above 200.

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 B.A.

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.

Refer to the UCLA Transfer Admission Guide at http://www.admissions.ucla.edu/prospect/admin_tr.htm for up-to-date information regarding transfer selection for admission.

The Major

Required: Eleven courses (44 to 47 units), including (1) three Russian language courses selected from Russian 100A, 100B, 100C, 101A, 101B, 101C, 102A, 102B, 102C, 103A, 103B,

During their senior year, students must also take Slavic 191T in which they complete a 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 Studies B.A.**

**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 Studies 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.

Refer to the UCLA Transfer Admission Guide at http://www.admissions.ucla.edu/prospect/adm.htm for up-to-date information regarding transfer selection for admission.

**The Major**


During their senior year, students must also take Slavic 191T in which they complete a 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.

**Honors Program**

The honors program is designed for exceptional departmental majors who wish to complete a research project that culminates in an honors thesis. Juniors and seniors 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 and a 3.5 GPA or better in the major courses, are eligible to apply. Students must have the sponsorship of an approved faculty adviser.

All honors students must enroll in Slavic 198A and 198B in two consecutive terms to conduct independent research and write the honors thesis. The results of the research should be presented as a conference paper at the annual Slavic Undergraduate Research Conference.

**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 (5 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 Ukrain- 101A, 101B, 101C (students who demonstrate sufficient fluency in one of these languages through departmental testing are exempt from this three-course sequence and can 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 126, Czech 155, Ethnomusicology 161C, History 120A through 120D, 130A, 130B, Polish 152A, 152B, 152C, Political Science 156B, 156D, Romanian 152, Russian 124G, Serbian/Croatian 154, Slavic 125, 179, Sociology M166, Ukrainian 152, Women’s Studies M166, or 185; (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/Croatian 102A, 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 126, Czech 155, Ethnomusicology 161C, History 120A through 120D, 130A, 130B, Hungarian 121, Polish 152A, 152B, 152C, Political Science 156B, 156D, Romanian 152, Russian 124G, Serbian/Croatian 154, Slavic 125, 179, Sociology M166, Ukrainian 152, Women’s Studies M166, 185.

With approval of the undergraduate adviser, other related upper division courses may be applied toward the minor. No more than two courses (8 to 10 units) may be applied toward both this minor and a major in another department or program.

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):** Russian 6 or 20 or equivalent proficiency, one course from 25, 25W, 90A, 90B, or 90BW.

**Required Upper Division Courses (20 to 23 units):**

Students select one of the following options: (1) Russian 101A, 101B, 101C and two additional Russian language or literature courses; (2) Russian 100A, 100B, 100C and two additional Russian language or literature courses; or (3) five Russian language and literature courses selected from 102A, 102B, 102C, 103A, 103B, 103C, 107A, 107B, 107C, 130A, 130B, 130C, 140A through 140D, with a minimum of three courses in Russian language.

Students may petition to substitute courses after consulting with the undergraduate adviser. No more than two courses (8 to 10 units) may be applied toward both this minor and a major in another department or program.

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 Literature Minor**

To enter the Russian Literature minor, students must have an overall grade-point average of 2.0 or better.

**Required Lower Division Courses (9 to 17 units):** Russian 3 or 10 or equivalent proficiency, one course from 25, 25W, 90, 31, 32, 90A, 90B, or 90BW.

**Required Upper Division Courses (20 units):**

Five Russian language and literature courses, including at least two from Russian M118, 119, 120, 130A, 130B, 130C, 140A through 140D.

Students may petition to substitute courses after consulting with the undergraduate adviser. No more than two courses (8 to 10 units) may be applied toward both this minor and a major in another department or program.

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): Russian 3 or 10 or equivalent proficiency course from 25, 25W, 50, 31, 32, 90A, 90B, or 90BW.

Required Upper Division Courses (20 units): Five courses in Russia-related fields, with a minimum of three courses selected from History M127A through 127D, Honors Collegium 130, 164, Political Science 128A, 128B, 156A.

Students may petition to substitute courses after consulting with the undergraduate adviser.

No more than two courses (8 to 10 units) may be applied toward both this minor and a major in another department or program.

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, http://www.gdnet.ucla.edu/gasas/library/pgmrqintro.htm. 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 Languages and Literatures offers Master of Arts (M.A.), Candidate in Philosophy (C.Phil.), and Doctor of Philosophy (Ph.D.) degrees in Slavic Languages and Literatures.

Bulgarian

Upper Division Courses
101A-101B-101C. Elementary Bulgarian. (5-5-5) Lecture, five hours. Course 101A is requisite to 101B, which is requisite to 101C. Basic courses in Bulgarian language. P/NP or letter grading.

Central and East European Studies

Lower Division Course
91. Culture and Society in Central and Eastern Europe. (5) Lecture, three hours; discussion, one hour. Interdisciplinary course to introduce students to main themes and concepts of central and east European studies, including historical background, nation states and ethnic groups, languages spoken in area, and culture and politics in communist and post-communist periods: religion, literature, mass media, music, art, and cinema. P/NP or letter grading.

Upper Division Course
126. Coldwar Central European Culture. (4) (Formerly numbered Slavic 126.) Lecture, three hours. Examination of coldwar Central European culture through prism of prose fiction, essays, and film from 1947 to 1992. Analysis of strategies of Polish, Czech, Hungarian, and East German writers as articulation of tensions, contradictions, and compromises informing communist rule in central and eastern Europe, with focus on culture as node of resistance as well as accommodation to communist system. P/NP or letter grading.

Czech

Upper Division Courses
102A-102B-102C. Advanced Czech. (4-4-4) Lecture, three hours. Requisite: course 101C. P/NP or letter grading.
155. Survey of Czech Literature from Middle Ages to Present. (4) Lectures and readings in English. P/NP or letter grading.
187B. Advanced Tutorial Instruction in Czech. (2) Tutorial, one hour; laboratory, one hour. Requisite or corequisite: course 187A. Tutorial and guided independent study of advanced Czech: advanced conversational, composition, vocabulary development, and review of selected grammar topics. P/NP or letter grading.
187C-187M. Advanced Tutorial Instruction in Czech. (2) Tutorial, one hour; laboratory, one hour. Preparation: prior course in sequence or Czech placement test. Tutorial and guided independent study of advanced Czech: advanced conversational, composition, vocabulary development, and review of selected grammar topics. P/NP or letter grading.
215. Survey of Czech Literature from Middle Ages to Present. (4) Lecture, three hours. Requisite: course 101C. Course 102A is requisite to 102B, which is requisite to 102C. Tutorial, one hour; laboratory, one hour. Preparation: prior course in sequence or Czech placement test. Tutorial and guided independent study of advanced Czech: advanced conversational, composition, vocabulary development, and review of selected grammar topics. P/NP or letter grading.
Graduate Course

280. Seminar: Polish Literature. (4) Seminar, three hours. Selected topics in Polish prose, poetry, and drama. May be repeated for credit with consent of instructor and graduate adviser.

Romanian

Lower Division Course

90. Introduction to Romanian Civilization. (4) Lecture, three hours. Introductory survey of social and cultural institutions of Romanian people and their historical background. P/NP or letter grading.

Upper Division Courses


102A-102B-102C. Advanced Romanian. (5-5-5) Lecture, five hours. Requisite: course 101C. Course 102A is requisite to 102B, which is requisite to 102C. 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. Letter grading.

103. Intensive Elementary Romanian. (12) Intensive basic course in the Russian language equivalent to courses 1, 2, and 3. 11A-11B-12A-12B-13A-13B. Self-Paced Program in Russian. (2 each) Russian language; 2 to 4 units per term recommended. Each 2-unit course in sequence requires 30 minutes of laboratory session per week and 30 minutes of discussion session per week, plus individual instruction as required by the staff. Courses 11B and higher require completion of or simultaneous enrollment in all courses lower in sequence. P/NP or letter grading.

25. Russian Novel in Translation. (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 who have previously taken course 25. P/NP or letter grading.

30. Russian Literature and World Cinema. (4) Lecture, three hours. Introductory survey of Russian literary masterpieces and their screen adaptations in various national cinematic traditions, with focus on problems of perception and misperception arising when literature is translated into film, and when national culture is viewed through the eyes of another. P/NP or letter grading.

31. History of Russian Cinema. (5) Lecture, three hours; discussion, one hour; film screening, three hours. Overview of Russian cinema from silent films of early 20th century to current developments, with focus on cinematic styles, genres, and directors. Special attention paid to difficulties of visual and verbal storytelling. P/NP or letter grading.

50A. Introduction to Russian Civilization. (5) Lecture, three hours; computer laboratory, 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. Russian civilization; one hour. Not open for credit to students with credit for course 90BW. 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.

90BW. Russian Civilization in 20th Century. (5) Lecture, three hours; discussion, one hour. Enforced requisite: English Composition 3 or 3H as a Second Language 36. Not open for credit to students with credit for course 90B. 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.

101A-101B-101C. Third-Year Russian. (5-5-5) Recitation, five hours. Course 101A is requisite to 101B, which is requisite to 101C. For students who speak Russian and have difficulty reading and writing. Focus on improving reading and writing skills, increasing vocabulary, and developing speaking skills required for academic discourse. P/NP or letter grading.

102A-102B-102C. Advanced Tutorial Instruction in Russian. (2 each) Tutorial, one hour; laboratory, one hour. Requisite: course 101C. Tutorial and guided independent study of advanced Russian: advanced conversation, composition, vocabulary development, and review of selected grammar topics. P/NP or letter grading.

25A. Advanced Russian Civilization. (5) Lecture, three hours; computer laboratory, one hour. Introduction to Russian culture and society from earliest times to 1917. P/NP or letter grading.

25B. Russian Film in Translation. (5) Lecture, three hours; discussion, one hour. Enforced requisite: English Composition 3 or 3H as a Second Language 36. Not open for credit to students who have previously taken course 25. P/NP or letter grading.

31. History of Russian Cinema. (5) Lecture, three hours; discussion, one hour; film screening, three hours. Overview of Russian cinema from silent films of early 20th century to current developments, with focus on cinematic styles, genres, and directors. Special attention paid to difficulties of visual and verbal storytelling. P/NP or letter grading.

31. History of Russian Cinema. (5) Lecture, three hours; discussion, one hour; film screening, three hours. Overview of Russian cinema from silent films of early 20th century to current developments, with focus on cinematic styles, genres, and directors. Special attention paid to difficulties of visual and verbal storytelling. P/NP or letter grading.

50A. Introduction to Russian Civilization. (5) Lecture, three hours; computer laboratory, 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. Russian civilization; one hour. Not open for credit to students with credit for course 90BW. 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.

90BW. Russian Civilization in 20th Century. (5) Lecture, three hours; discussion, one hour. Enforced requisite: English Composition 3 or 3H as a Second Language 36. Not open for credit to students with credit for course 90B. 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.

101A-101B-101C. Third-Year Russian. (5-5-5) Recitation, five hours. Course 101A is requisite to 101B, which is requisite to 101C. For students who speak Russian and have difficulty reading and writing. Focus on improving reading and writing skills, increasing vocabulary, and developing speaking skills required for academic discourse. P/NP or letter grading.

102A-102B-102C. Advanced Tutorial Instruction in Russian. (2 each) Tutorial, one hour; laboratory, one hour. Requisite: course 101C. Tutorial and guided independent study of advanced Russian: advanced conversation, composition, vocabulary development, and review of selected grammar topics. P/NP or letter grading.

103. Intensive Elementary Romanian. (12) Intensive basic course in the Russian language equivalent to courses 1, 2, and 3. 11A-11B-12A-12B-13A-13B. Self-Paced Program in Russian. (2 each) Russian language; 2 to 4 units per term recommended. Each 2-unit course in sequence requires 30 minutes of laboratory session per week and 30 minutes of discussion session per week, plus individual instruction as required by the staff. Courses 11B and higher require completion of or simultaneous enrollment in all courses lower in sequence. P/NP or letter grading.

25. Russian Novel in Translation. (5) Lecture, three hours; discussion, one hour. Enforced requisite: English Composition 3 or 3H as a Second Language 36. Not open for credit to students who have previously taken course 25. P/NP or letter grading.

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90B. Russian Civilization in 20th Century. (5) Lecture, three hours. Russian civilization; one hour. Not open for credit to students with credit for course 90BW. 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.

90BW. Russian Civilization in 20th Century. (5) Lecture, three hours; discussion, one hour. Enforced requisite: English Composition 3 or 3H as a Second Language 36. Not open for credit to students with credit for course 90B. 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.

101A-101B-101C. Third-Year Russian. (5-5-5) Recitation, five hours. Course 101A is requisite to 101B, which is requisite to 101C. For students who speak Russian and have difficulty reading and writing. Focus on improving reading and writing skills, increasing vocabulary, and developing speaking skills required for academic discourse. P/NP or letter grading.

102A-102B-102C. Advanced Tutorial Instruction in Russian. (2 each) Tutorial, one hour; laboratory, one hour. Requisite: course 101C. Tutorial and guided independent study of advanced Russian: advanced conversation, composition, vocabulary development, and review of selected grammar topics. P/NP or letter grading.

187C. Advanced Tutorial Instruction in Russian. (3) Lecture, three hours. Lectures and readings in English. Survey of Romanian literature from Middle Ages to present. P/NP or letter grading.

187C-187M. Advanced Tutorial Instruction in Romanian. (3 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. P/NP or letter grading.

197C. Advanced Tutorial Instruction in Ukrainian. (3) 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. P/NP or letter grading.

Graduate Course

201. Romanian as a Romance Language. (4) Lecture, three hours. Survey of structure and development of the Romanian language, with special emphasis on relationship of Romanian to other members of the Romance group.

Russian

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. P/NP or letter grading.

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 cultures. Emphasis on English of selection of literary works by well-known 20th-century Siberian writers whose texts serve as locus for closer examination of Siberian regional literary culture and ecological networks in which it exists. Letter grading.

123. Historical Commentary on Modern Russian. (4) Lecture, three hours. Requisite: course 101C. Historical examination of phonological and morphological anomalies of modern Russian.


124G. Studies in Russian literature: Gogol. (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. P/NP or letter grading.

124T. Studies in Russian literature: Tolstoy. (4) Lecture, three hours. Preparation: third-year Russian reading proficiency. Readings focus on Tolstoy's major novels of the late 19th century. May be repeated for credit with topic and/or instructor change. P/NP or letter grading.


170. 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 227F. P/NP or letter grading.

178A. Advanced Tutorial Instruction in Russian. (2) Tutorial, one hour; laboratory, one hour. Requisite: course 228C or 227E. Introduction to Analysis of Russian Narrative Prose. Close analysis of genre, narrative, and rhetorical strategies and interplay of literature, history, and culture. 178B. Tutorial and guided independent study of advanced Russian: advanced conversational composition, vocabulary development, and review of selected grammar topics. P/NP or letter grading.

187B. Advanced Tutorial Instruction in Russian. (2) Tutorial, one hour; laboratory, one hour. Requisite or corequisite: course 187A. Tutorial and guided independent study of advanced Russian: advanced conversational composition, vocabulary development, and review of selected grammar topics. P/NP or letter grading.

187C-187M. Advanced Tutorial Instruction in Russian. (2, each) Tutorial, one hour; laboratory, one hour. Preparation: prior course in sequence or Russian placement test. Tutorial and guided independent study of advanced Russian: advanced conversational composition, vocabulary development, and review of selected grammar topics. P/NP or letter grading.

191. Variable Topics Research Seminars: Russian literature. (4) Seminar, three hours. Requisite: course 187C. 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.

194A-194D. Russian: Vocabulary, Pronunciation, Conversation. (4 each) Lecture, four hours. Requisite: course 102C. Conducted in Russian. Reading and analysis of texts with focus on vocabulary, pronunciation, and style, respectively, in three consecutive terms. S/U or letter grading.


203. Practicum in Russian. (2) Requisite: course 201C. Two terms per year required of Ph.D. students. Reading of advanced texts; advanced composition, conversation; stylistics. May be repeated for credit. S/U grading.

204. Introduction to History of Russian Literary Language. (4) Lecture, three hours. Requisites: Slavic 201A, 201B. May be repeated for credit.

211A. Literature of Medieval Russia. (4) Lecture, three hours. Required for M.A. (literature). Lecture on the literature from its beginnings in the Middle Ages to Muscovite periods up to the 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. Required for M.A. (literature). Survey devoted to emergence of critical and psychological realism, beginning with early works of Turgeniev, Goncharov, and Dostoevsky, moving to major novels of Tolstoy, Dostoevsky, and Saltykov-Shchedrin, and concluding with works of the presymbolist period, especially short stories of Chekhov.

213A. 20th-Century Russian Literature, 1890 to 1929. (4) Lecture, three hours. Required for M.A. (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, Belyj, Kheblikov, Pasternak, Platonov, and others. S/U or letter grading.


219. Movements and Genres in Russian Literature. (4) Lecture, three hours. Introduction to most important theoretical issues of Russian literature viewed in diachronic perspective. Letter grading.


Graduate Courses

201A-201B. Russian: Vocabulary, Pronunciation, Conversation. (4 each) Lecture, four hours. Requisite: course 102C. Conducted in Russian. Reading and analysis of texts with focus on vocabulary, pronunciation, and style, respectively, in three consecutive terms. S/U or letter grading.


203. Practicum in Russian. (2) Requisite: course 201C. Two terms per year required of Ph.D. students. Reading of advanced texts; advanced composition, conversation; stylistics. May be repeated for credit. S/U grading.

204. Introduction to History of Russian Literary Language. (4) Lecture, three hours. Requisites: Slavic 201A, 201B. May be repeated for credit.

211A. Literature of Medieval Russia. (4) Lecture, three hours. Required for M.A. (literature). Lecture on the literature from its beginnings in the Middle Ages to Muscovite periods up to the 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. Required for M.A. (literature). Survey devoted to emergence of critical and psychological realism, beginning with early works of Turgeniev, Goncharov, and Dostoevsky, moving to major novels of Tolstoy, Dostoevsky, and Saltykov-Shchedrin, and concluding with works of the presymbolist period, especially short stories of Chekhov.

213A. 20th-Century Russian Literature, 1890 to 1929. (4) Lecture, three hours. Required for M.A. (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, Belyj, Kheblikov, Pasternak, Platonov, and others. S/U or letter grading.


219. Movements and Genres in Russian Literature. (4) Lecture, three hours. Introduction to most important theoretical issues of Russian literature viewed in diachronic perspective. Letter grading.

241. Topics in Russian Phonology. (4) Lecture, three hours. Requisite: course 220A. Selected topics in Russian phonology. May be repeated for credit with consent of instructor.

242. Topics in Russian Morphology. (4) Lecture, three hours. Requisite: course 220A. Selected topics in Russian inflection and derivation. May be repeated for credit with consent of instructor.

243. Topics in Historical Russian Grammar. (4) Lecture, three hours. Requisites: course 204, Slavic 221. Selected topics in Russian historical phonology, morphology, and syntax. May be repeated for credit with consent of instructor and graduate adviser.

244. Discourse Grammar of Russian. (2 or 4) Lecture, three hours. Analysis of phenomena of Contemporarv Standard Russian controlled by discourse/ pragmatic factors. At all levels of linguistic structure from phonology to intersentential syntax. S/U or letter grading.


265. Topics in Russian Syntax. (4) Lecture, three hours. Requisite: course 220B. Traditional and generative approaches to Russian syntax. May be repeated for credit with consent of instructor.

270. Russian Poetics. (4) Lecture, three hours. Introduction to technical study of Russian poetics and versification, 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.

290. Seminar: Russian Poetry. (4) Seminar, three hours. Recommended preparation: course 270. Detailed study of a single author, period, or work. May be repeated for credit with consent of instructor and graduate adviser.

291A. Seminar: Literature of Medieval Rus’. (4) Seminar, three hours. Requisite: course 211A. Select topics from the 11th through the 17th century. May be repeated for credit with consent of instructor and graduate adviser.

291B. Seminar: 18th-Century Russian Literature. (4) Seminar, three hours. Requisite: course 211B. Select authors and works from 18th-century poetry, prose, and drama. May be repeated for credit with consent of instructor and graduate adviser.

292. Seminar: 19th-Century Russian Literature. (4) Seminar, four hours. Requisites: 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. Requisite: course 213A. Selected 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.

294. Seminar: Russian Literary Criticism. (4) Seminar, three hours. Requisites: courses 211B, 212A, 212B. Detailed study of specific school of literary criticism, single literary critic, or period in Russian literary history as reflected in literary criticism. Simultaneous or similar phenomena in literary criticism in West. May be repeated for credit with consent of instructor and graduate adviser. S/U or letter grading.

296. Seminar: History of Russian Culture. (4) Discussion, three hours. Reading and discussion on selected topics in Russian culture.

Serbian/Croatian

Upper Division Courses

101A-101B-101C. Elementary Serbian/Croatian. (5-5-5) Lecture, five hours. Course 101A is requisite to 101B, which is requisite to 101C. Basic courses in Serbian/Croatian. P/NP or letter grading.

102A-102B-102C. Advanced Serbian/Croatian. (4-4-4) Lecture, four hours. Requisite: course 101C. Course 102A is requisite to 102B, which is requisite to 102C. 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. P/NP or letter grading.

187A. Advanced Tutorial Instruction in Serbian/Croatian. (2) Tutorial, one hour; laboratory, one hour. Requisite: course 102C or Serbian/Croatian placement test. Recommended corequisite: course 187B. Tutorial and guided independent study of advanced Serbian/Croatian: advanced conversation, composition, vocabulary development, and review of selected grammar topics. P/NP or letter grading.

187B. Advanced Tutorial Instruction in Serbian/Croatian. (2) Tutorial, one hour; laboratory, one hour. Requisite or corequisite: course 187A. Tutorial and guided independent study of advanced Serbian/Croatian: advanced conversation, composition, vocabulary development, and review of selected grammar topics. P/NP or letter grading.

187C-187M. Advanced Tutorial Instruction in Serbian/Croatian. (2 each) Tutorial, one hour; laboratory, one hour. Preparation: prior conversation or Serbian/Croatian placement test. Tutorial and guided independent study of advanced Serbian/Croatian: advanced conversation, composition, vocabulary development, and review of selected grammar topics. P/NP or letter grading.

Upper Division Courses

103E. Intensive Elementary Estonian, (12) Lecture, 19 hours. Intensive basic course in Estonian equivalent to one year of language study. Use of series of thematically arranged, structurally graduated readings, conversation exercises, and individual and group assignments, as well as journal writing, to provide systematic overview of linguistic characteristics of Estonian language. P/NP or letter grading.

103L. Intensive Elementary Latvian, (12) Lecture, 19 hours. Intensive basic course in Latvian equivalent to one year of language study. Use of series of thematically arranged, structurally graduated readings, conversation exercises, and individual and group assignments, as well as journal writing, to provide systematic overview of linguistic characteristics of Latvian language. P/NP or letter grading.

CM114. Teaching and Learning of Heritage Language (Same as Arabic 1212.) 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 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.

125. Intervar European Community Prose. (4) Lecture, three hours. Analysis of selected novels, stories, plays, and essays of representative authors of the 1920s and 1930s in translation. Special attention to relation between literature and historical and ethnic concerns. P/NP or letter grading.

179. Baltic and Slavic Folklore and Mythology. (4) Lecture, four hours. General course for students interested in folklore and mythology and for those interested in Indo-European mythic antiques. P/NP or letter grading.
191T. Senior Thesis in Slavic Languages and Literatures. (4) Seminar, three hours. Limited to senior departmental majors. Planning and completion of senior thesis; students make verbal and written presentations. Normally taken in Spring Quarter of senior year. P/NP or letter grading.

197. Individual Studies in Slavic Languages and Literatures. (2 to 6) 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 required. May be repeated for credit. Individual contract required. P/NP or letter grading.

198A-198B. Honors Research in Slavic Languages and Literatures. (4-4) tutorial, three hours. Course 198A is requisite to 198B. Limited to junior/senior departmental honors program students. Development and completion of honors thesis under direct supervision of faculty member. May be repeated for credit. Individual contract required. Letter grading.

199. Directed Research in Slavic Languages and Literatures. (2 to 6) tutorial, to be arranged. Limited to juniors/seniors. Supervised individual research under guidance of senior faculty member. 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 M.A. (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. S/U grading.


211. Slavic Gender Linguistics. (2 or 4) Lecture, three hours. Examination of linguistic differences between male and female speech and of language used to refer to females and males. Course contributes to understanding of gender issues, and sociolinguistic and sociocultural profile of HLLs, particularly HL groups most represented among UCLA students; institutional and instructor attitudes toward female students; socio-economic status of student membership; and expectations on HL curriculum and teaching approaches; similarities and differences between HLLs and foreign language learners (FLLs) regarding teaching method, classroom materials, learner assessment, and needs analysis; use of oral/aural proficiency as springboard for literacy instruction; optimization of instruction of mixed HL and FLL 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 humanities and social sciences. Emphasis to be determined by requirements of background and enrollment of students. Topics include overview of pedagogical, historical, and cultural contexts; surveys of languages and translation systems; acquisition of Slavic and East European library materials; and East and Southeast European scholarships in the West. Relevant reference sources, archival resources, and research methods; survey of online databases; compilation of bibliographies. S/U grading.

230A-230B-230C. Topics in Comparative Slavic Literature. (4-4-4) Lecture, three hours. Recommended preparation: M229. Survey of texts, authors, and periods of selected topics. P/NP or letter grading.


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.

282. Seminar: Structural Analysis. (4) Seminar, three hours. Selected topics. May be repeated for credit with consent of instructor and graduate adviser.

M299. Research Resources for European Studies. (2) (Same as French M299, German M299, Informatica Studies M299, Italian M299, and Spanish M299) Lecture, two hours. Essentials of library research strategy and effective searching in key print and online resources for European and Russian studies. Through combination of lecture, online demonstration, and hands-on activities in and outside class, students understand how to efficiently use library and databases. 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 course instruction and administration at UCLA. May be repeated for credit. S/U or letter grading.

495. Teaching Slavic Languages at College Level. (4) Seminar, 90 minutes; discussion, 90 minutes. Designed for graduate students. Theory and practice of language teaching. Discussion of contemporary language teaching methodology as well as problems of pedagogical grammar. S/U grading.

596. Directed Individual Study or Research. (2 to 4) tutorial, to be arranged. S/U grading.

597. Preparation for M.A. Comprehensive Examination or Ph.D. Qualifying Examinations. (2 to 4) Tutorial, to be arranged. S/U grading.

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
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Larthia R. Dunham, M.S.W.
Woo K. (Toby) Hur, M.S.W.
Katherine M. Kolodziejhi, Ph.D., Emeritus
Jane E. Kurohara, M.S.W., Emerita
Gerardo P. Lavilla, L.C.S.W., M.S.W.
Karen Lee, L.C.S.W., M.S.W.
Joseph A. Nunn, Ph.D., Emeritus
Mary Kay Oliveri, L.C.S.W., M.S.W.
Winifred E. Smith, M.S.W., Emerita
Michelle Talley, L.C.S.W.

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 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 healthcare, 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, http://www.gdnet.ucla.edu/gasas/library/pgmqrintro.htm. In many cases, more detailed guidelines may be outlined in an-
nouncements, 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. welfare programs and policies guiding them, with emphasis on analysis of policy developments/issues related to provision of social welfare services. Study of historical and current responses of professional to major social problems. 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 values, perspectives, and 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, 101. Description and demonstration of basic skills employed in direct social work practice via casework process. Students practice these skills in a small group, role-play, video or audio exercises. P/NP or letter grading.

M104C. Diversity in Aging: Roles of Gender and Ethnicity. (4) (Same as Gerontology M104C and Women's Studies 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 using research from 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 processes, with application to aging 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 Gerontology M104E) Lecture, four hours. Topics include theories of aging, elderly roles, social relationships, and special populations. Weekly seminars organized around key aspect of social gerontology. P/NP or letter grading.

M105. Social Welfare Policy in Modern America: Historical Perspectives. (4) Lecture, three hours; outside study, eight hours. Historical and contemporary policy dealing with three core societal problems: poverty, sickness, and joblessness. Programs developed by governments to ameliorate these problems have typically involved 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 system and 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. Students select one field of observation. Letter grading.

107. Field Practicum: Social Welfare. (4) Lecture, three hours; discussion, one hour; outside study, eight hours. Requisite: course 106. In field practicum students are placed in a specific agency where they combine observation of agency functions with participation in specific agency tasks and roles under instructional supervision of an agency mentor and a UCLA faculty member. P/NP or letter grading.

130A-130B. Community Research and Services Seminars. (4-4) Seminar, three hours; service learning, four hours; outside study, five hours. Course 130A is required to 130B. Limited to juniors/seniors. Exploration and roles of social welfare policy within government, organizations, and communities. Reflections about service-learning site experiences, with application of issues related to lecture and seminar readings. Students to be assigned to two-termin mentoring site where they apply tutoring techniques as they assist middle school children living in impoverished areas of Los Angeles County. In Progress (130A) and P/NP or letter (130B) grading.

131. Poverty, Poor, and Welfare Policy. (4) Seminar, three hours. Limited to juniors/seniors. Current research on issues and policy responses concerning poverty in the U.S., with specific emphasis on single-parent households. Overview of measurements and characteristics of poor people; theoretical and empirical issues of social welfare policies to combat poverty, particularly Aid to Families with Dependent Children (AFDC) and Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) and the recently enacted state welfare reform policies. Relationship between research knowledge about poverty and current policies, and the development of basic skills for working with 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 systematic organizing framework. Community-level interventions are affected by community's social ecology, culture, economic system, political system, ethnic composition, and class structure. Agencies often seek to 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 and responding to community needs, issues, and concerns. Social service agencies and community ties can work together in partnership to enhance quality of community life. P/NP or letter grading.

M142SL. Intergenerational Communication across Lifespan. (4) (Same as Gerontology M142SL) Lecture, two hours; fieldwork, one hour. Limited to juniors/seniors. What do you say to your grandparents? How do you talk to your parents in conversation? How do they talk to you? Does your family talk well to one another as group? How do you communicate with those who are 30 years older than you? Individuals of all ages interact with one another, and their interactions have significance throughout their lives. Introduction to psychological, interpersonal, and societal issues related to intergenerational communication across lifespan. Letter grading.

151. Child Welfare Policy in America. (4) Lecture, three hours. Limited to juniors/seniors. Examination of public child welfare system in the U.S. Major programs dealing with children's needs and services to families, including child chil- dren, including welfare, food stamps, child care, child support, and children's allowance programs. Review of research and analysis in this area. Overview of social policies and programs and their impacts on the U.S. Examination of comparative policies in other countries. P/NP or letter grading.

152. Health Policy and Services. (4) Seminar, three hours. Limited to juniors/seniors. Contemporary issues in health care financing and delivery and their historical perspective on these issues. Role of government in healthcare and ways controversy about this role continues to shape and constrain 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 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 health-care policy and practice. P/NP or letter grading.

153. Prevention of Risky Substance Use and Related Problems. (4) Lecture, four hours. Limited to jun- iors/seniors. Prevention of substance use and related harms from legal or illegal substances is a major concern to parents, communities, and nations. Examination of research related to patterns of drug use and related harms (such as death, disorder) and effectiveness of interventions to reduce these problems. Through review of science-based programs and policies, evaluation of effectiveness of evidence-based interventions, health education, skills, and expert advice in determining effective interventions to reduce drug-related harm, using most up-to-date information. P/NP or letter grading.

154. 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. P/NP or letter grading.

M156. Disability Policy and Services in Contemporary America. (4) (Same as Disability Studies M130) Lecture, three hours. Limited to juniors/seniors. Growing numbers of people of 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 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 demands and policies continue to influence evolving public policy responses? P/NP or letter grading.
181. Nonprofit Sector, State and Civil Society. (4) (Formerly numbered C181.) Lecture, three hours; out-
side study, three hours. Use of political economy per-
spective to analyze forces that have shaped rise and
characteristics of nonprofit sector and its constituent
elements. Examination of social history of nonprofit
sector in historical and policy environments and
distinct organizational forms. Comparative perspective
between U.S. and other countries. P/NP or letter
grading.

(4) Seminar, three hours; outside study, nine
hours. Examination in depth of particular subfield of
social welfare (e.g., child welfare, children and youth,
nonprofit, health, mental health). Limits of investigation
set by individual instructor. May be repeated for credit
with topic change. Letter grading.

194. Internship Seminars: Social Welfare. (1) Semi-
nar, one hour; outside study, three hours. Corequisite:
course 195. Not open to freshmen. Introduction to top-
ics relevant to psychosocial determinants of children’s
health and community resources for children and fami-
lies, with opportunity to gain breadth and depth of
knowledge and skill setting. May be repeated for
credit. P/NP grading.

195. Community Internships in Social Welfare. (2)
Tutorial, four hours. Corequisite: course 194. Not open
to freshmen. Students in community placement to pro-
vide direct care with infants, children, and chil-

199. Directed Research in Social Welfare. (2 or 4)
Tutorial, two hours. Limited to juniors/seniors. Super-
vised individual research or investigation under guid-
ance of faculty mentor. Culminating paper required.
Letter grading.

200. History and Philosophy of Social Welfare. (2)
Discussion, two hours. Review of current status of homelessness; who homeless are, what are their needs and
how. Letter grading.

200A. Homelessness: Housing and Social Ser-
vice Issues. (4) (Same as Urban Planning M270.)
Lecture, 90 minutes; discussion, 90 minutes; one field
trip. Review of current status of homelessness; who homeless are, what are their needs and how. Letter grading.

220. Social Welfare Policy and Services II. (4)
Lecture, three hours; outside study, nine hours. Na-
ture, roles, and history of welfare systems; different
strategies for solving problems; new issues and trends;
legal and ethical considerations of welfare. S/U or
letter grading.

221B. Social Welfare Policy and Services II. (4)
Lecture, three hours; outside study, nine hours. Na-
termary health system; different strategies for solving
problems; new issues and trends; legal and ethical con-
siderations in social welfare. S/U or letter grading.

222. Seminar: Social Work Profession. (2) Semi-
nar, two hours. Nature and role of social work in con-
temporary society; relationships to other profes-
sions; probable future trends; social work ethics, pro-
fessional organizations, certification licensing;
professional responsibility for continued self-criti-
cism and improvement of profession. S/U grading.

225A-225B. Social Welfare Policy. (4-4) Seminar,
hours. Designed for Ph.D. students. Letter grad-
ing.

225A. Formulation and Analysis. (4) Seminar, three
hours. Designed for Ph.D. students. Examination of
principal issues in development, formulation, and
adoption of U.S. welfare policies, with particular focus
on income distribution and redistribution. Em-
phasis on analysis of theoretical assumptions and concep-
tual frameworks for analysis. Letter grading.

225B. Implementation and Evaluation. (4) Seminar,
hours. Designed for Ph.D. students. Examination of
issues in implementation and evaluation of social
welfare policies. Emphasis on determining provi-
sion, organization, and delivery of social services, in-
cluding auspices funding, distribution, criteria for effec-
tiveness, 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 Ph.D. students. Exploration of one problem for study —
its history, current state of knowledge about why problem exists, and what might be done about it. Sur-
vey of several problems and alternative ways in which
problems have been conceptualized and studied to un-
derstand how social work practice evolved and gain em-
pirical evidence to advance what is known, what is yet unknown, where there are important gaps in understanding par-
ticular problems, and what might be done to solve them. Letter grading.

229B. Craft of Social Welfare Scholarship II. (2)
Lecture, 90 minutes; outside study, four and one half
hours. Enforced requisite: course 229A. Limited to
Ph.D. students. Continued study of one social welfare research problem, moving from understanding of evolution and context of general problem to more detailed and intensive review of re-
search literature on the core problem. Open-ended 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 meth-
ods of summarizing research literatures, identifying seminal studies, and interpreting contradictory find-
ings. Regular meetings to discuss ongoing work and to
courage students to review their work with their fac-
ulty advisor and other students with expertise in their
problem areas. Letter grading.

229C. Craft of Social Welfare Scholarship III. (2)
Lecture, 90 minutes; outside study, four and one half
hours. Enforced requisite: course 229B. Limited to Ph.D.
students. Continued study of one social welfare research problem, moving from understanding of evolution and context of general problem to more detailed and intensive review of re-
search literature on the core problem. Open-ended 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 meth-
ods of summarizing research literatures, identifying seminal studies, and interpreting contradictory find-
ings. Regular meetings to discuss ongoing work and to
courage students to review their work with their fac-
ulty advisor and other students with expertise in their
problem areas. Letter grading.
231K. Advanced Theory of Social Welfare Practice with Individuals, Families, and Groups: Mental Health. (4) Lecture, three hours; outside study, nine hours. Corequisite: required social work practicum. Designed to provide students with grounding in social work practice with adults in mental health settings. Emphasis on evidence-based approaches to providing services to pervasive and persistent mentally ill. Exploration of strengths-based recovery-oriented approaches that are consistent with knowledge and values of social work practice. Exposure to range of interventions applicable to most common mental health problems and emerging patterns of physical, economic, and social planning within framework of social change theory. Letter grading.

M241E. Leadership, Development, and Governance of Nonprofit Organizations. (4) (Same as Public Policy M228 and Urban Planning M230.) Lecture, three hours; outside study, nine hours. Designed for graduate students. 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. Letter grading.

M241F. Strategic Planning for Public and Nonprofit Organizations. (4) Lecture, three hours; outside study, nine hours. Designed for graduate students. Technical processes of problem solving regarding substantive 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.


231P. Advanced Theory of Social Welfare Practice with Individuals, Families, and Groups: Gerontology. (4) (Formerly numbered 231D.) 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 impaired functioning in client. Theoretical underpinnings and most effective practice models to enable students to serve needs of older clients and their families as they adjust to late-life transitions, as well as to health and care problems most prevalent for older adults. Client populations range from well elderly to physically frail and/or demented from diverse backgrounds. 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 identification, analysis, and evaluation of needs using various settings, 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; re- search on theory and practice with emphasis on planning in context 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.

M241D. Social Advocacy and Domestic Violence. (4) (Same as Law M359.) Lecture, three hours; fieldwork. Use of domestic violence as case study to give students needed skills to advocate for individuals or isues. How systems work, how law legitimizes systems, and how advocacy can be used to change systems. Letter grading.

241E. 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. Methods of social work practice policy and advocacy as problem-solving process. Analysis of consequences of societal policies, particularly for marginalized populations, development of alternative policies, and use of different advocacy tools/techniques to gain support for policy change. S/U or letter grading.


245A. Epistemology of Practice. (4) Seminar, three hours. Designed to encourage students to guide scientific models of practice theories; process of emergence, development, and change of practice theories; intellectual foundations of practice theories; how professionals apply, accumulate, and modify their practice knowledge; science and practice interpretive. Letter grading.


245B-245B. Foundations of Scientific Inquiry I, II, III, (4-4-4) Lecture, three hours; outside study, nine hours. Limited to Ph.D. students. Introduction to underlying logic(s) of scientific inquiry to provide students with building blocks for independent scholarship. Letter grading.

249A. Experimental and quasi-experimental approaches in intervention research, ways of enhancing internal, external, and statistical conclusion validity, and inferring causality. 249B. Enforced requisite: course 249A. Survey design, sampling strategies, and data collection, and reliability as measurement issue. 249C. Interdisciplinary collaboration: Introduction to a array of qualitative research strategies.

251A. Advanced Theory of Social Welfare Practice: Violence against Women. (4) Lecture, three hours. Designed for second-year M.S.W. students in macro and clinical social work. One most pervasive aspect of women’s existence has been violence against them as consequence of their gender. Female and critical examination of theories, research, and methods of intervention research that seek to design, test, evaluate, and disseminate innovative intervention technologies. Letter grading.

258. Critical Problems in Social Welfare. (2) Discussion, two hours. Designed for Ph.D. students. Current problems in field of social welfare. Specific topics vary depending on research and educational interests and needs of class. May be repeated for credit. S/U grading.

280A-280B. Knowledge Acquisition, Evidence-Based Practice, and Research in Social Welfare. (1-3) Limited to first-year M.S.W. students. Designed to stimulate student thinking about importance and relevance of evidence in social welfare. 280A. (Formerly numbered 280.) Lecture, three hours. Five-week course in Fall Quarter. Introduction to foundations of critical thinking to develop students’ ability to examine ideas, beliefs, and knowledge. Examination of variable meanings of research and introduction to some basic components of scientific method. Critical examination of utility and role systematic literature review plays in building knowledge/evidence. In Progress grading (credit to be given only on completion of course 280B). 280B. Seminar, three hours. Five-week course in Spring Quarter. Examination of evidence-based practice in social work, including its many and varied meanings. Exposure to utility of single case designs and role of program evaluation and social work practice. S/U or letter grading.
281A-281B-281C. Advanced Social Welfare Research. (2-2-2) Discussion, two hours. Individual or group research projects requiring intensive examination and analysis of social problem area, directed toward development of research knowledge and techniques for social work practice. In Progress (281A, 281B) and S/U or letter grading.

285A-285B-285C. Research in Social Welfare. (4-4-4) Discussion, three hours. Review of areas of research of concern to social workers, with special attention to design, instrument construction, data collection, data analysis, evaluation, interpretation, and development of new designs. Studies designed to include survey, panel, experimental observation, and theory development research. S/U or letter grading.


285E. Research in Gerontology. (4) Lecture, three hours. Overview of research in aging. Development of research questions, selecting appropriate theoretical frameworks, conducting literature reviews, selecting appropriate research designs, identifying sampling methods. Special considerations in aging research, including sampling, questionnaire design, and recruitment issues. Letter grading.

285F. Research in Health. (4) Lecture, three hours. Research methods and policies and selection of readings about range of research from field of health services. Identification of research design issues, design of research instruments, analysis of strengths and limitations of current approaches to health services research, consideration of alternative roles for social work practitioners in arena of health services. Letter grading.


285H. Program Evaluation Research. (4) Lecture, three hours. Discussion of differences and similarities between evaluation and other research, alternative program evaluation 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.

286A. 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.

286B. Advanced Research Methods. (4) Seminar, three hours. Advanced concepts underlying research methods. Continuing study of 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.

285C. Research Internship. (4) Fieldwork, four hours. Supervised participation through participation in on-going research project or one initiated by students and carried out under faculty supervision, enabling students to apply research skills developed in previous courses. May be repeated for credit. S/U grading.

290A-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, families, and communities and new patterns of intervention based on recent demonstrations and research. S/U or letter grading.

290D. Children with Special Healthcare Needs: Systems Perspective. (4) Same as Community Health Sciences M420 and Health Services M420.) Lecture, three hours; fieldwork, one hour. Examination and evaluation of principles, policies, programs, and practices that affect the health and welfare of children and adolescents with developmental needs or chronic illness and their families. Letter grading.

290E. 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 given form in public child welfare system. Examination of development of an infrastructure to support needs of children and families. S/U or letter grading.

290F. Mental Health Policy. (4) Same as Public Policy M213.) Lecture, three hours. Examination of evolution of social policy for mentally ill, with emphasis on political, economic, ideological, and sociological factors that affect views of mentally ill and services they are provided. S/U or letter grading.

290G. 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.

290H. Health Policy. (4) Same as Public Policy M215.) Lecture, three hours. Introduction to contemporary issues in healthcare 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.

290I. Public 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 grading.

290J. Aging Policy, Elderly and Families. (4) Same as Public Policy M261.) Lecture, three hours; outside study, nine hours. Designed for graduate students. Examination of theoretical models and concepts of policy process and aging policy. Analysis of decision-making processes that affect social policies. Description of historical development of contemporary policy. Exploration of current proposals and issues. Letter grading.


290L. Law and Poor. (4) Same as Law M215, Public Policy M225, and Urban Planning M248.) Lecture, three hours. Designed for graduate students. Study of major income-related problems in U.S. with emphasis on intersection of moral attitudes toward poor and structure and implementation of law, policy, and administration. Use of reform consensus and major reforms. Letter grading.

290M. Nonprofit Sector, State and Civil Society. (4) Formerly numbered CM290M.) Same as Public Policy M227 and Urban Planning M228.) 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 environments and distinct organizational forms. Comparative perspective between U.S. and other countries. S/U or letter grading.

290T. Social Work and Juvenile Justice System. (4) Lecture, three hours; outside study, nine hours. Designed for graduate students. Exploration of evolution of juvenile justice system in the U.S. and issues that have shaped current-day practice. Role of social workers in system to be theme throughout course. Letter grading.

290U. Community Development and Housing Policies: Roles of State, Civil Society, and Nonprofits. (4) Same as Public Policy M243 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 and community organizations. 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.

290V. Management Challenges and Tools for Nonprofit Sector. (4) Same as Public Policy M256 and Urban Planning M286.) Lecture, three hours; outside study, nine hours. Designed for graduate students. Examination of management tools useful in addressing issues of nonprofit management in nonprofit sector. Students develop management skills in strategic thinking/problem solving, project management, team building, and negotiation. Use of case studies to test critical management challenges, from finance to crisis management to marketing, that nonprofit managers typically face. Letter grading.

290W. International Social Welfare. (4) Lecture, three hours; outside study, nine hours. Intended for graduate students interested in pursuing analysis of key international social welfare issues. Topics approached from perspective of globalization of social, economic and political systems. Examination of global poverty, social injustice and inequality, and issues of racial, ethnic, and cultural diversity, with emphasis on multilayered contributions of social work, social services, and social welfare and international social development within rich and poor countries. Acquisition of knowledge of international social welfare activities, as well as analytical skills to address and debate complex international issues. S/U or letter grading.

290X. Graduation Seminar. (1-1-0) Seminar, to be arranged. Preparation: apprentice personnel placement as teaching assistant, associate, or fellow. Topics and approach vary, and the specific courses are to be arranged with the student and supervisor of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. Letter grading.

401A-401B-401C. Practicum; Social Work. (3-3-3) Laboratory, 20 hours. Educationally directed practicum conducted in selected health, welfare, and educational facilities. Provides opportunities for students to test their theoretical knowledge and to acquire disciplined practice foundation in profession. In Progress (401A, 401B) and S/U (401C) grading.

402A-402B-402C. Advanced Practicum; Social Work. (4-4-4) Laboratory, 24 hours. Requisites: courses 401A, 401B, 401C. Practicum in social work, arranged for students in keeping with their major field of study. In Progress (402A, 402B) and S/U (402C) 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.
596A. Special Study and Research in Social Welfare. (2 to 8) Tutorial, to be arranged. Individual programming for selected students to permit pursuit of subject in greater depth. S/U or letter grading.

596B. Special Study and Research for Ph.D. Candidates. (2 to 12) Tutorial, to be arranged. Limited to Ph.D. students. S/U grading.

597A. Preparation for M.S.W. Comprehensive Examination. (2 to 8) Tutorial, to be arranged. S/U grading.

597B. Preparation for Ph.D. Qualifying Examinations. (2 to 12) Tutorial, to be arranged. Limited to Ph.D. students. S/U grading.


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**SOCIETY AND GENETICS**

*Center for Interdisciplinary Instruction*

*College of Letters and Science*

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Matthew Norton Wise, Ph.D.

**Associate Professors**
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Hannah Landecker, Ph.D.

**Assistant Professor**
Aaron L. Panofsky, Ph.D.

**Adjunct Assistant Professor**
Deborah Greenfield, J.D.

**Scope and Objectives**

The Human Biology and Society majors provide 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 sorts of knowledge and skills required to investigate and address such problems rather than by building up from 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 of the time that are inextricably problems of society, culture, and biology. Students learn about genetically modified foods, forensic uses of DNA, new cloning technologies, gene testing and therapies, genetic privacy, gene patents, mapping DNA through human history, politics of race and heredity, genetics of behavior, and many other related topics, and become more active citizens, well-trained in both biological and social concepts and practices.

Programmatically, the majors consist of required elements that develop critical thinking skills, knowledge, and excellence in written and spoken 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 genetics, with special attention to their social context and content. Given the dynamic interaction between genetics and the social world in which it is embedded, the minor is robustly multidisciplinary.

The emphasis on multidisciplinary scholarship is reflected in the collaborative, cross-disciplinary approach to instruction in the core courses of the minor, as well as in the wide range of elective courses available in such areas as anthropology, biology, history, philosophy, public policy, and sociology.

**Undergraduate Study**

**Human Biology and Society B.A.**

**Human Biology and Society Premajor**

All students intending to major in Human Biology and Society must enroll as Human Biology and Society premajors after receiving a grade of B or better in Society and Genetics 5. After completing the premajor requirements with a minimum grade-point average of 2.9, students should petition to enter the major at the undergraduate counselor's office in 1308 Rolfe Hall.

**Preparation for the Major**

*Required: Anthropology 7, Chemistry and Biochemistry 14A, Life Sciences 1, 2, Society and Genetics 5, Statistics 10 or 13, one empirical social theory course from American Indian Studies M10, Anthropology 9, Asian American Studies 20, Geography 3, History 3C, Honors Collegium 70A, Human Complex Systems M10A, Molecular, Cell, and Developmental Biology 40, 50, Microbiology, Immunology, and Molecular Genetics 12, Public Policy 10A, or Sociology 1, and one normative social theory course from Molecular, Cell, and Developmental Biology 60, Philosophy 4, 6, 8, 22, Sociology M5, or Women's Studies 10. Each course must be taken for a letter grade, and students must complete all premajor courses with a minimum grade-point average of 2.9. Admission to the major is granted only after successful completion of all lower division requirements.

Enrollment in the program is limited. The required course is listed above for courses in the optional subfocus areas.

**Transfer Students**

Transfer applicants to the Human Biology and Society B.A. major with 90 or more units must complete at least five of the following seven preparatory courses prior to admission to UCLA: the equivalent of Life Sciences 1 and 2, introductory chemistry, statistics, one anthropology human evolution course, and two introductory social sciences or history courses. 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 at http://www.admissions.ucla.edu/prospect/adm_tr.htm for up-to-date information regarding transfer selection for admission.

**The Major**

*Required: Society and Genetics 101, 105A, 105B, 191R, Anthropology 193 and Society and Genetics 193 (or two terms of one of them); two total terms of any of Molecular, Cell, and Developmental Biology 199, Society and Genetics 195, and/or 196; and five courses from one of the following concentration areas, including at least one society and genetics course, selected in consultation with a departmental faculty member:*


Historical and Social Studies of Science: Anthropology M125A, 153P, 181, 182, 185A, Asian American Studies 105, Bioengineering 165EW, Biophysics 168, Biotechnology 169, Chemistry and Biochemistry 179A, Computer Science M131, Ecology and Evolutionary Biology 100, 120, 126, 130, 175, Environmental Health Sciences 100, C185A, C185B, Epidemiology 100, Geography M109, M115, Global Studies 100A, 100B, History M151C, 179A, 179B, 180A, 180C, Honors Collegium 177, Human Complex Systems M130, Human Genetics C144, Neurobiology M169, Philosophy 124, 125, 129, 130, 132, 155, Society and Genetics 102W, 130, 131, 161, 163, 175, 197, 199, Sociology M138, 143, 148, 154, 156, 170, Women's Studies 134, M162, M164, M180B. See below for courses in the optional subfocus areas of cell development, microbiology and immunology, molecular biology and genomics, physiology, and psychology and mental health.

Medicine and Public Health: Anthropology M134, Chicania and Chicano Studies M106, Communication Studies 116, M123W, Computer Science CM121, Disability Studies 101, M121, M124, M125, M126, M129, M130, M131, M132, M133, M134, M135, M136, M137, M138, M139, M140, Microbiology, Immunology, and Molecular Genetics 101, 185A, and one course from 103L, 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 CM122, or 158

Physiology: Physiological Science 111A, 111B, and one course from 147, 149, or 177

Population Genetics: Two courses from Ecology and Evolutionary Biology 135, Human Genetics CM124, Society and Genetics 120, and one course from Ecology and Evolutionary Biology 120, 121, or Human Genetics C144


Human Biology and Society B.S.

Human Biology and Society Premajor
All students intending to major in Human Biology and Society must enroll as Human Biology and Society premajors after receiving a grade of B or better in Society and Genetics 5. After completing the premajor requirements with a minimum grade-point average of 2.5, students should petition to enter the major at the undergraduate counselor's office in 1308 Rolfe Hall.

Preparation for the Major
Required: Anthropology 7, Chemistry and Biochemistry 14A, 14B, 14BL, 14C, 14CL, 14D (or 20A, 20B, 20L, 30A, 30AL, 30B, 30BL), Life Sciences 1, 2, 3, 4, Mathematics 3A, 3B, 3C (or 31A, 31B, 32A), Physics 1A, 1B, 1C, 4BL, 4AL (or 6A, 6B, 6C), Society and Genetics 5, Statistics 10 or 13, one empirical social theory course from American Indian Studies M10, Anthropology 9, Asian American Studies 20, Geography 3, History 3C, Human Complex Systems M10A, Microbiology, Immunology, and Molecular Genetics 12, Molecular, Cell, and Developmental Biology 40, 50, Public Policy 10A, or Sociology 1, and one normative social theory course from Molecular, Cell, and Developmental Biology 30, Philosophy 4, 6, 8, 22, Sociology M5, or Women's Studies 10. Each course must be taken for a letter grade, and students must complete all premajor courses with a minimum grade-point average of 2.5. Admission to the major is granted only after successful completion of all lower division requirements.

Enrollment in the program is limited. The requisite grade-point averages plus completion 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.

Transfer Students
Transfer applicants to the Human Biology and Society B.S. 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, 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. Students should also complete at least two of the following introductory courses prior to admission: one statistics course, one anthropology human evolution course, and two introductory social sciences or history courses. 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 at http://www.admissions.ucla.edu/prospect/adm_tr.htm for up-to-date information regarding transfer selection for admission.

The Major
Required: Society and Genetics 102W, 105A, 105B, 191R; Anthropology 193 and Society and Genetics 193 (or two terms of one of them); two total terms of any of Molecular, Cell, and Developmental Biology 199, Society and Genetics 195, and/or 196; and five courses from one of the following concentration areas, including at least one society and genetics course, selected in consultation with a departmental faculty member:


Each course (except Anthropology 193 and Society and Genetics 193) must be taken for letter grade and passed with a grade of C− or better, and all courses must be completed with an overall 2.0 grade-point average.

Optional Subfocus Areas
Optional subfocus areas are designed and recommended for students planning to go on to medical, dental, or pharmacy schools, or graduate school in the life or health sciences. Students select one subfocus area and complete three courses within that area:

Cell Development: Molecular, Cell, and Developmental Biology 138, 165A, 168


Microbiology and Immunology: Microbiology, Immunology, and Molecular Genetics 101, 185A, and one course from 103L, 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 CM122, or 158

Physiology: Physiological Science 111A, 111B, and one course from 147, 149, or 177

Population Genetics: Two courses from Ecology and Evolutionary Biology 135, Human Genetics CM124, Society and Genetics 120, and one course from Ecology and Evolutionary Biology 120, 121, or Human Genetics C144


Human Biology and Society B.S.
M114, 125, 134, M162, M164, 171A. See below for courses in the optional 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 M125A, 153P, 181, 182, 185A, Asian American Studies 105, Bioengineering 165EW, Disability Studies 101, M121, Ecology and Evolutionary Biology 100, 120, 126, 130, 175, Environmental Health Sciences 100, C185A, C185B, Epidemiology 100, Geography M109, M115, Global Studies 100A, 100B, History M151C, 179A, 179B, 180A, 180C, Honors Collegium 177, Human Complex Systems M130, Human Genetics C144, Neurobiology M169, Philosophy 124, 125, 129, 130, 132, 155, Society and Genetics 130, 131, 161, 163, 175, 197, 199, Sociology M138, 143, 148, 154, 156, 170, Women's Studies 134, M162, M164, M180B. See below for courses in the optional subfocus areas of cell development, microbiology and immunology, molecular biology and genomics, physiology, and psychology and mental health.

**Medicine and Public Health:** Anthropology M134, Chicana and Chicano Studies M108, Communication Studies 116, M123W, Computer Science CM121, Disability Studies 101, M121, Epidemiology 100, History M151C, Human Complex Systems M130, Human Genetics C144, Neurobiology M169, Philosophy 124, 125, 129, 130, 132, 155, Society and Genetics 130, 131, 161, 163, 175, 197, 199, Sociology M138, 143, 148, 154, 156, 170, Women's Studies 134, M162, M164, M180B. See below for courses in the optional subfocus areas of cell development, microbiology and immunology, molecular biology and genomics, physiology, and psychology and mental health.


Each course (except Anthropology 193 and Society and Genetics 193) must be taken for letter grade and passed with a grade of C- or better, and all courses must be completed with an overall 2.0 grade-point average.

**Optional Subfocus Areas**

Optional subfocus areas are designed and recommended for students planning to go on to medical, dental, or pharmacy school, or graduate school in the life or health sciences. Students select one subfocus area and complete three courses within that area:

- **Cell Development:** Molecular, Cell, and Developmental Biology 138, 165A, 168

- **Ecology and Evolutionary Biology:** Three courses from Anthropology 121C, 124A, 124P, M125A, 128A, Ecology and Evolutionary Biology 100, 116, 120, 121, 126, 129, 130, 135, 175, 176

- **Microbiology and Immunology:** Microbiology, Immunology, and Molecular Genetics 101, 185A, and one course from 103L, 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 CM122, or 158

- **Physiology:** Physiological Science 111A, 111B, and one course from 147, 149, or 177

**Population Genetics:** Two courses from Ecology and Evolutionary Biology 135, Human Genetics CM124, Society and Genetics 120, and one course from Ecology and Evolutionary Biology 120, 121, or Human Genetics C144

**Psychology and Mental Health:** Three courses from Psychology M107, 112A, 112B, 115, M117J, 127A, 129C, 160

**Honors Program**

To receive departmental honors, students must take each course in the major (except Anthropology 193 and Society and Genetics 193) 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 take Society and Genetics 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**

To enter the Society and Genetics minor, students must (1) have an overall grade-point average of 2.5 or better and (2) file a petition at the undergraduate counselor's office in 1308 Rolfe Hall no later than three terms before graduation. They are encouraged to declare the minor as early as possible and to discuss their proposed course of study with the undergraduates adviser.

**Required Upper Division Courses (30 to 34 units):**

1. (1) Society and Genetics 101 or, for life sciences majors, a 4- or 5-unit upper division elective course from the approved list of courses issued each term by the program, (2) course 102W, (3) course 191, and (4) at least four upper division elective courses (minimum 16 units) from the approved list. One individual research tutorial (course 199) may be applied; enrollment in additional 199 courses may be considered by petition.

Students may petition to have a course not on the approved list applied toward the four-course elective requirement.

No more than one upper division course may be applied toward both this minor and a major or minor in another department or program.

Each minor course must be taken for a letter grade. Successful completion of the minor is indicated on the transcript and diploma.

**Society and Genetics**

**Lower Division Course**

5. Integrative Approaches to Human Biology and Society. (5) 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 biotechnology 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 and public understanding of science. Letter grading.

**Upper Division Courses**

101. Genetic Concepts for Human Sciences. (5) Lecture, three hours; discussion, one hour. Not open to credit for 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 interaction at various levels and culminating in exploration of notion of coevolution of genotypes and society. Basic science concepts presented through real-world issues and research problems. Current research on cancer, immune system and development, and how this research is performed and adds to knowledge. Letter grading.

102W. DNA: Promise and Peril. (5) Formerly numbered M102W. Lecture, three hours; discussion, one hour. Enforced prerequisite: English Composition 3 or 3H or English as a Second Language 36. Sequence of events required personal genome is now available to us. Consideration of impact that knowledge of this genomic sequence has on concepts of ourselves as individuals and of our place in biological universe. Exploration of how this information influences concepts of race/ethnicity and gender. Examination of ability of DNA-based forensics to identify specific individuals. Ownership and commodification of genes. Discussion of human cloning for reproductive and therapeutic purposes. Human Genome Project influence on not just medicine, but our concepts of self and identity. Satisfies Writing II requirement. Letter grading.

105A. Ways of Knowing in Life and Human Sciences (4) Lecture, three hours. Enforced requisite: course 5. Introduction to study of epistemology to train students to recognize different ways of knowing what we know. In life and human sciences, instruments and methods are use to study, measure, and experiment. Exploration of how they are manifest in technologies and fields.
that cut across disciplines to help students evaluate explanatory models, standards of proof, and qualitative versus quantitative research orientations. DNA sequencing, tissue cultures, bioinformatics, statistics, photography and cinema, charts, trees, and databases. DNA sequencing is used to study gene functions, evolution, and disease. We will discuss the role in legal context to reconstruct aspects of human history or to trace identity of people. Databases play role in life sciences in administrative, commercial, and legal contexts. DNA 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. Enforced requisites: course 5B. Study of formation of identities and forms of life sciences in administrative, commercial, and legal contexts. DNA is used in sciences and medicine (e.g., X-ray photography), as well as in art and forensics. Letter grading.

120. Using Genetics to Infer Human History. (4) Seminar, three hours. DNA elucidates human history in ways that traditional historical investigation sometimes cannot. Introduction to tools for non-specialists. Discussion of practical and theoretical background (e.g., challenges of using ancient DNA, population genetic theory) necessary to critically evaluate genetic history studies. Prehistoric and historical data about who we are as members of human and non-human species. Focus on how genetic analysis has been used to investigate major agricultural expansions in Europe, and resulting impact on current and past populations of human and non-human species. Discussion of implications for understanding human and non-human history and the role of social factors in shaping human and non-human history. Letter grading.

126. Biotechnologies, Law, and Body. (4) Seminar, three hours. Nature and authority of human bodies, how they are constructed and used. Historical and philosophical analysis of how law has shaped and continues to shape the construction and use of human bodies. Consideration of what rights are associated with human bodies and how these rights can be used to support or restrict genetic research and development. Letter grading.

163. Science and Popular Movements: Controversies. (4) Seminar, three hours. Exploration of how science intersects with social movements and how social movements intersect with science. Topics will vary and may include race, obesity and nutrition, autism, deafness or blindness, inequality. Examination of governments' use of science and technology to reconstruct aspects of human history. Letter grading.

180. Special Courses in Society and Genetics. (4) Lecture, 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.

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. 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.


191S. Capstone Seminar: Society and Genetics. (5) 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. Letter grading.

191S. Capstone Seminar: Society and Genetics. (5) 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. Letter grading.


195. Community or Corporate Internships in Society and Genetics. (2) Tutorial, to be arranged; fieldwork, six hours. Enforced requisites: course 102W or 102R. Limited to juniors/seniors. Study of how genetic inheritance is used to reconstruct aspects of human history. Letter grading.

195. Community or Corporate Internships in Society and Genetics. (2) Tutorial, to be arranged; fieldwork, six hours. Enforced requisites: course 102W or 102R. Limited to juniors/seniors. Study of how genetic inheritance is used to reconstruct aspects of human history. Letter grading.
Sociology

College of Letters and Science

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Cameron D. Campbell, Ph.D.
Duane W. Champagne, Ph.D.
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Tanya Stivers, Ph.D.
Megan McDonnell Sweeney, Ph.D.

Assistant Professors
Stefan Bargheer, Ph.D.
Richard D. Granits, Ph.D.

Adjunct Associate Professor
Ana Maria Goldani, Ph.D.

Scope and Objectives

Sociology is the study of the organization, dynamics, and consequences of social life. The scope of the discipline is as broad and diverse as social life itself. Sociologists study social interaction 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 participants, examine recorded interaction, interpret historical documents, analyze census data, and conduct large surveys. The methods and concepts of sociological study yield powerful insights into the social processes shaping lives, problems, and possibilities in contemporary society. The capacity to identify and understand these processes — a capacity that C.W. Mills called the "sociological imagination" — is valuable 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 analytic 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 provides 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 Sociology Department 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 Ph.D. 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 B.A.

Sociology Premajor

Only students with less 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; one course from Mathematics 2, 3A, or 31A; one course from Statistics 10, 11, 13, or Psychology 100A.

A minimum grade of C is required in each preparation for the major course. Students with a grade-point average less than 2.5 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. All preparation for the major courses should be completed by the end of the Fall Quarter of the third year at UCLA. 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, one finite mathematics or calculus course, and one statistics course.

Refer to the UCLA Transfer Admission Guide at http://www.admissions.ucla.edu/prospect/adm_tr.htm 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 113 or Statistics 112; (3) one course from each of the following core areas: (a) interactions — Sociology 111, 119, M124A, CM125, 130, 132, 133, 134, (b) institutions and social processes — courses 116, 143, 158, 173, M174, M175, M176, (c) power and inequality — courses 156, 157, M161, M162, M165, 182, 183, 185; 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, and one sociology elective (six 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, 196A, 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 Counselor'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 112, 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, http://www.gdnnet.ucla.edu/gasaa/library/pgmrqintro.htm. 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 (M.A.), Candidate in Philosophy (C.Phil.), and Doctor of Philosophy (Ph.D.) 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 analysis of social phenomena. P/NP or letter grading.

Sociology Organization of Black Communities. (5) (Same as Afro-American Studies M5.) Lecture, four hours; discussion, one hour; field trips. Analysis and interpretation of social organization of black communities, with focus on origins and development 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. Examination 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 and data, sociological research, with focus on issues of research design, data collection, and analysis of data. Fieldwork may be required. Letter grading.


88A-88Z. Lower Division Seminars. (1 each) Seminar, one hour. Limited to 15 freshmen/sophomores. Variable topics of current sociological interest. Consult Schedule of Classes or "Department Announcements" for topics and instructors. P/NP grading.

Upper Division Courses
101. Development of Sociological Theory. (5) Lecture, 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, writing field notes, field interviewing, 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. Requisite: 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 use of theory methods. Analysis and write up of these materials and to write ethnographic paper. Letter grading.

110. Sociological Methods. (4) Lecture, three hours; discussion, one hour. Course open to juniors/seniors. General problems of scientific abstraction, generalization, inference, and verification and particular problems of historical specification, comparison, and counterfactual reasoning in constructing and testing replicable explanation of historical event. P/NP or letter grading.

111. Social Networks. (4) Lecture, three hours; laboratory, one hour. Analysis of how social networks create social structure in which social actors utilize them, and their unexpected effects. Topics include job search, finding efficiency, and social movements. Visualization programs, computer simulations, and research project. P/NP or letter grading.

112. Introduction to Mathematical Sociology. (4) Lecture, three hours; laboratory, one hour. Requisites: Mathematics 2, 3A (course whose content includes introductions to probability 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 mathematics). Letter grading.

113. Statistical and Computer Methods for Social Research. (4) Lecture, three hours; laboratory, one hour. Requisites: Statistics 10. Combination of Statistics 10, covering more advanced statistical techniques such as multiple regression, analysis of variance, or factor analysis. Content varies, but students learn how to use computer and write papers analyzing prepared data sets. P/NP or letter grading.

114A-114B. Introduction to Scientific Sociology. (4) Lecture, three hours; discussion, one hour. How to make testable arguments about social reality; how to make and test causal arguments. How to use computer and write papers analyzing prepared data sets. P/NP or letter grading.

M115. Environmental Sociology. (4) (Same as Environmental M133.) Lecture, three hours; discussion, one hour. Relationship between society and environment. Analysis of detail of interactions 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 behavior, such as marriage, fertility, and changes associated with family and household organization. Sociological approach to understanding causes and consequences of trends and differentials in family formation and dissolution. P/NP or letter grading.

M118. Simulating Society: Exploring Artificial Communities. (5) (Same as Honors College M148.) Seminar, three hours; computer laboratory, one hour. Examination of social behavior through 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 in the diverse behaviors and cultural forms of primate cousins, with special focus on baboons, chimpanzees, and gorillas. Examination of primate sociocology, sexual competition, demography and kinship, politics, communication, and interactions within and between groups. Implications for our lives as human primates. P/NP or letter grading.

M124A-M124B. Conversational Structures I, II. (4-4) (Same as Communication Studies 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. M124B. Requisite: course M124A. Consideration of some more expanded se-
quenence structures, story structures, topical sequences, and overall structural organization of single conversations.

CM125. Talk and Social Institutions. (4) (Same as Communication Studies M125.) Lecture, four hours; discussion, one hour. Designed for juniors/seniors. Practices of communication and social interaction in numberous settings. Setting varies but includes emergency services, police and courts, medicine, news interviews, and political offices. Concurrently scheduled with course C256. P/NP or letter grading.

126. Study of Norms. (4) Lecture, three hours; discussion, one hour. Properties of norms, of normatively governed conduct, of lay and professional methods for describing, measuring, and validating norms; in contrasting settings of socially organized activities; relevance of these properties for programmatic problems of analytic sociology. Fieldwork required. P/NP or letter grading.

127. Mind and Society. (4) Lecture, two and one-half hours; discussion, one hour. Requisite: course 1. Study of social production of modes of thought and forms of knowledge. Study of ways in which bodies of knowledge and cognitive styles are produced, used, and transformed in everyday, organizational, and extraordinary contexts. P/NP or letter grading.

128. Sociology of Emotions. (4) Lecture, three hours; discussion, one hour. Requisite: course 1. Designed for juniors/seniors. Sociological theories and explanations of social conditions shaping and producing emotional experiences; effects of individual expression of emotions on social conditions; relations between thought, sensations, and emotions; self and emotions; social construction of emotions. 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 modern societies; ritual, 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 domination. 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 others in individual society. 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 intergroup processes through which youth become involved in juvenile delinquency or labor in Mexico-U.S. context. Requisite: course 1. P/NP or letter grading.

133. Collective Behavior. (4) Lecture, three hours; discussion, one hour. Requisite: course 1. 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.


135. Group Processes. (4) Lecture, three hours; discussion, one hour. Systematic study of formation, structure, and functioning of groups; analysis of group processes and group products from variety of theoretical viewpoints; implications of various research techniques. P/NP or letter grading.

M138. Death, Suicide, and Trauma. (4) (Same as Psychology M163.) Lecture, three hours; discussion, one hour. Sociological analysis of incidence of violent death. Suicide is eight leading cause of death in U.S. and third leading cause for young people aged 15 to 24. Both types of 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. An important sociological argument and evaluation of explanatory potential of different theories to make sense of violent death; paying particular attention to forensic and medicolegal systems, detectives, and forensic pathologists. 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 Mexican Americans, police and courts, medicine, news interviews, and political offices. Concurrently scheduled with course C256. P/NP or letter grading.

141B. Migration and Labor in Mexico-U.S. Context: Research Seminar. (5) Seminar, 10 hours; fieldwork, 10 hours. Development of qualitative micro-study and research paper. Research of one particular community in Mexico-U.S. context. Research topic of interest to be selected so students become familiar with commonly employed qualitative methods of research. Designed to help students understand ethnographic methods 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 research study on golden ager research paper to be presented to faculty members and peers. Offered in summer only. Letter grading.

M142. Healthcare in Transitional Communities. (4) (Same as Public Health M151.) 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.


145. Sociology of Deviant Behavior. (4) Lecture, three hours; discussion, one hour. Examination of leading sociological approaches to study of deviant and general survey of major types of deviance in American society. P/NP or letter grading.

C146. Sociology of Interpersonal Conflict. (4) Lecture, three hours; discussion, one hour. Origins, development, and resolution of interpersonal conflicts and adjustment of conflict and its consequences. P/NP or letter grading.

147A. 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.

147B. Sociology of Criminal Justice. (4) Lecture, three hours; discussion, one hour. Examination of structures and routine decision-making processes of key criminal justice institutions, including police, courts, probation and parole, jails and prisons. P/NP or letter grading.


149. Youth, Trouble, and Juvenile Justice. (4) Lecture, three hours; discussion, one hour. Requisite: course 1. 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. Role of older people in family, communities, and society; aging as process; aging and society; social policies; and role of sociology in helping to improve the lives of older people. P/NP or letter grading.

152. 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. Requisite: course 151. Exploration of sociological studies of Chinese immigration, with focus on international context, organization, and institutions of Chinese American society and its interactions with social environment. P/NP or letter grading.

154. Race and Ethnicity: International Perspectives. (4) Lecture, three hours; 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 M155.) Lecture, three hours; discussion, one hour. Requisite: course 151. Study of historical and social conditions of Latinos in Los Angeles as well as nationally, with particular emphasis on their location in larger social structure and on comparisons with other minority groups in immigration, family, education, and work issues. P/NP or letter grading.

156. 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 and to transformation of Asian American and Latino communities and the nation generally, brought by renewal of mass migration in second half of the 20th century. P/NP or letter grading.

157. Social Stratification. (4) Lecture, three hours; discussion, one hour. Requisite: course 151. Study of 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.


159. Comparative Studies of Jewish Communities in the U.S. and Abroad. (4) Lecture, three hours; discussion, one hour. History, distribution, structure, and functioning of major Jewish communities, with particular emphasis on North America and Israel. Interrelationships and sources of conflict between Jews and Gentiles in Western countries. More generally, eco-
nomic and social integration of Diaspora Jewish com-
munities. Fieldwork may be required. P/NP or letter grading.

160. Intergroup Conflict and Prejudice. (4) Lecture, three hours; discussion, one hour. Study of causes and consequences of group conflict, with emphasis on majority/minority relations, prejudice, and discrimina-
tion. Special emphasis on alternative sociological and psychological theories of prejudice; effects of minority status on individuals; and possibilities for attitude and behavior change. P/NP or letter grading.

M161. Comparative American Indian Societies. (4) (Same as American Indian Studies M161.) Lecture, three hours. Requisite: course 1 or American Indian Studies M10. Comparative and historical study of politi-
cal, economic, and cultural changes in indigenous North American societies. Several theories of social change, applied to selected case studies. Letter grading.

M162. Sociology of Gender. (4) (Same as Women’s Studies M162.) Lecture, three hours. Requisite: course 1 or Women’s Studies 10. Ex-
amination of processes by which gender is socially con-
structed. Topics include distinction between biolog-
ical sex and sociological gender, causes and conse-
quences 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 Women’s Studies M163.) Lecture, three hours. Requisite: course 1 or Women’s Studies 10. Exploration of relationship of gender to work, concentrating on the U.S. experience but also including 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. Post-Reproductive. (4) (Same as Wom-
en’s Studies M164.) Lecture, three hours; discussion, one hour. Title refers to intersection between politics and life cycle. Topics include social construction of gender and reproductive issues, policies and politics of motherhood, motherhood, and surroga-
cy, and new reproductive technologies. Letter grading.

M165. Sociology of Race and Labor. (4) (Same as Afro-American Studies M165 and Labor and Work-
place Studies M165.) Lecture, three hours; discussion, one hour. Limited to juniors/seniors. Exploration of rel-
ationship between race/ethnicity, employment, and U.S. labor movement. Analysis of underlying racial di-
 visions in industry and industrialized societies. Legalization of consideration of circumstances under which workers and unions have excluded people of color from jobs and unions. Emphasis on changing circumstances under which workers and unions have organized people of color into unions in efforts to improve their wages and work-
ing conditions. Impact of globalization on these dy-
namics. P/NP or letter grading.

M166. Women in Socialist and Post-Socialist States. (4) (Same as Women’s Studies M166.) Lecture, three hours; discussion, one hour. Limited to juniors/seniors. Exploration of diverse aspects of women’s lives in socialist and post-
socialist states. Although transition from socialism may dif-
curiously, gender differences are everywhere central to democratization and marketization. Discus-
'sion of ways in which state policies affect women. Let-
ter grading.

168. Organizations and Society. (4) Lecture, three hours; discussion, one hour. Sociological analysis of organizations and their social environment. Introduc-
tion to basic theories, concepts, methods, and re-
search on behavior of organizations in society. P/NP or letter grading.

169. Law and Society. (4) Lecture, three hours; dis-
cussion, one hour. Specific topics may include law in preindustrial and industrialized societies, legalization and decolonization, development and underdevelop-
ment of law, legal and illegal forms, public and private auspices. P/NP or letter grading.

170. Medical Sociology. (4) Lecture, three hours; dis-
cussion, one hour. Requisite: course 1. Provides ma-
jors in Sociology and other social sciences, as well as students preparing for health sciences careers, with understanding of health-seeking behavior and inter-
personal and organizational relations that are involved in receipt and delivery of health services. P/NP or letter grading.

171. Occupations and Professions. (4) Lecture, three hours; discussion, one hour. Description and analysis of representative occupations and profes-
sions, with emphasis on contemporary U.S. P/NP or letter grading.

172. Entrepreneurship. (4) Lecture, three hours; dis-
cussion, one hour. Description and analysis of entre-
preneurship, with special reference to economic and political development. Country and specific focus varies each term. P/NP or letter grading.

173. Economy and Society. (4) Lecture, three hours; dis-
cussion, one hour. Sociology of economic life, with emphasis on principal economic institutions of the U.S. P/NP or letter grading.

174. Sociology of the Family. (4) (Same as Wom-
en’s Studies M174.) Lecture, three hours; discussion, one hour. Theory and research dealing with modern family, its structure, and functions, including historical changes, variant family patterns, family as an institu-
tion, and influence of contemporary society on the fam-
ily. P/NP or letter grading.

175. Sociology of Education. (5) (Same as Educa-
tion M108.) Lecture, four hours; discussion, one hour. Study of how U.S. educational system both promotes socioeconomic aspirations, maintains socioeconomic inequalities: historical and theoretical perspec-
tives on role of education in U.S. society; trends in edu-
cational attainment; ways in which family background, class, race, and gender affect educational achieve-
ment and attainment; stratification between and within schools; effects of education on socioeconomic attain-
ment, family, health, attitudes, and social participation; educational policies and their consequences. P/NP or letter grading.

176. Sociology of Mass Communication. (4) (Same as Communication Studies M147.) Lecture, four hours; discussion, one hour. Limited to juniors/seniors. Studies in relationship between mass communication and social organization. Topics include history and or-
ganization of major media institutions, social forces that shape production of mass media news and enter-
tainment, selected studies in media content, and ef-
tects of media on society. P/NP or letter grading.

178. Sociology of Caribbean. (4) (Same as Afro-
American Studies M178.) Lecture, three hours; dis-
cussion, one hour. Limited to juniors/seniors. Historical soci-
ology of Caribbean, with emphasis on colonialism and decolonization, development and underdevelop-
ment of Caribbean, political economy, race relations, nationalism and migration. P/NP or letter grading.

179. Comparative East Asian Societies. (4) Lec-
ture, three hours; discussion, one hour. Designed for juniors/seniors. Introductory and comparative survey of traditional societies of East Asia, including China, Ja-
pan, Korea, and Vietnam, with focus on dynamic inter-
actions between culture, state, and society in process of change. P/NP or letter grading.

180A-180B. Special Topics in Sociology. (4 each) Lecture, three hours; discussion, one hour. Limited to juniors/seniors. Study of selected topics of sociological interest. Consult with instructor on topics and in-
structors. May be repeated for credit and may be ap-
plicated as elective units toward Sociology major. P/NP or letter grading.

181. State and Society in China. (4) Lecture, three hours; discussion, one hour. Development for juniors/se-
niors. Thematic overview of post-1949 society and pol-
itical development. Country and specific focus varies each term. Reading, discussion, and development of culminating project. Letter grading.

191A. Undergraduate Seminar: Self and Identity. (5) Seminar, three hours. Limited to junior/senior Soci-
ology majors. Examination of the social and interac-
tional contexts shaping definition, enactment, and experience of self. Reading, discussion, and de-
veloping culminating project. Letter grading.

191B. Undergraduate Seminar: Sociology of Hu-
mor and Laughter. (5) Seminar, three hours. Limited to junior/senior Sociology majors. Selected topics. Reading, discussion, and development of culminating project. Letter grading.

191C. Undergraduate Seminar: Money and Emo-
tions. (5) Seminar, three hours. Limited to junior/se-
nior Sociology majors. Selected topics. Reading, dis-
cussion, and development of culminating project. Let-
ter grading.

191D. Undergraduate Seminar: Sociology of Devel-
opment. (5) Seminar, three hours. Limited to juniors/
seniors. Taught in Spanish. Selected topics on develop-
ment in Third World from global perspective. Read-
ing, discussion, and development of culminating proj-
et Letter grading.

M191DC. CAPPP Washington, DC, Research Semi-
nars. (8) (Same as History M191DC and Political Sci-
cies M191DC.) Seminar, two to four hours. Limited to CAPPP Program students. Seminars for undergraduate students in Center for American Pol-
itics and Public Policy’s program in Washington, DC. Focus on development and maintenance of empir-
ical research based on experiences from Washington, DC-based field placements. Study of variety of qualita-
tive methods (observation, interviewing, etc.), with comparison to quantitative analysis. Examination of features of solid and significant research; intensive writing. Letter grading.

191E. Undergraduate Seminar: Population Growth Models. (5) Seminar, three hours. Limited to juniors/
seniors. Selected topics. Reading, discussion, and de-
velopment of culminating project. Letter grading.

191F. Undergraduate Seminar: Sociology of Glo-
balization. (5) Seminar, three hours. Limited to ju-
niors/seniors. Great extensibility 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, with focus on extent to which global expansion of capitalism, nation-state system, and international institutions are similar or different from each other, producing new lines of division and conflict across world. Reading, discussion, and development of culminating project. Letter grading.

191H. Honors Seminars: Sociology. (4) Seminar, three hours. Limited to sophomores with honors standing, pro-
ducing scholarly sociological research for students who intend to write undergraduate thesis for depart-
mental honors. Letter grading.
191L Undergraduate Seminar: Health and Inequality. (5) Seminar, three hours. Limited to juniors/seniors. During last 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 contemporary Mexican society and vital transformations it has undergone in recent years. Reading, discussion, and development of culminating project. Letter grading.

191L Undergraduate Seminar: Environmental Justice and Sustainability. (5) Seminar, three hours. Limited to juniors/seniors. Socioanalytical approaches to study environmental issues and problems. Topics include ecopolitics and environmental racism, global environmental change, sustainable development, and society-environment interface. Reading, discussion, and development of culminating project. Letter grading.

191M Undergraduate Seminar: Social Ecology. (5) Seminar, three hours. Limited to juniors/seniors. Fundamentals of sociological approach to social ecology, 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 environment on humans. Reading, discussion, and development of culminating project. Letter grading.

191N. Undergraduate Seminar: Urban and Suburban Sociology. (3) 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 urbanization; it began in early 19th century and still continues. Analysis of city politics, house and architectural styles, crime, urban terror, public housing and ghettos, segregation and integration and development of concepts of gentrification, gentrification, urban culture (especially art, museums, and movies), and environmentalism. Concurrently 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 Study Program: Cutting edge urban issues in country's largest city, including New York's attempt to plan for city of 9.2 million, rebuilding of World Trade Center, Robert Moses (New York's master builder), urban economic development, green New York, transportation systems, urban politics, houses and architectural styles, including New York's famous skyscrapers, historic preservation, crime and police departments, 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. Social and human reproduction is global policy issue. Government efforts to influence reproduction are important feature of modern state: political intervention in private life, including family planning, women's health, and sexuality. 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 from an inter-cultural-comparative approach. Reading, discussion, and development of culminating project. Letter grading.

191Q Undergraduate Seminar: Communication in Medical Care. (5) Seminar, three hours. Limited to juniors/seniors. Exploration of role of communication in primary care context. Use of microsociological methods to examine main facets of American primary care medical visits, including detailed analysis of interactional conduct of those visits and development of microsociological constructs to quantitative measures. Emphasis on direct contact with empirical materials and development of observational and analytic skills. Reading, discussion, and development of culminating project. Letter grading.

191R Undergraduate Seminar: Cultural Sociology. (5) Seminar, three hours. Limited to juniors/seniors. Introduction to classic theoretical approaches and contemporary developments in study of social worlds dedicated to creating and handling cultural institutions such as literature, journalism, film/television, art, architecture, fashion, and music. Study of cultural and social organization in general, with particular attention to social processes and their theoretical implications. Letter grading.

191S Undergraduate Seminar: Gender and Sexuality. (5) Seminar, three hours. Limited to juniors/seniors. Sexuality is important site for enactment of gender and sexual identity. The course examines relation between politics and life cycle or between public sphere and private life. Reading, discussion, and development of culminating project. Letter grading.

191T Undergraduate Seminar: War and Society. (5) Seminar, three hours. Limited to juniors/seniors. Study of relationship between society's military and its social organization in general, with particular attention to shock-based civic militarism characteristic of the West. Topics include honor, discipline, bureaucracy, conscription, logistics, total war, guerrilla war, terrorism, and counterinsurgency. Reading, discussion, and development of culminating project. Letter grading.

191U Variable Topics Research Seminars: Sociological. (5) Seminar, three hours. Limited to juniors/seniors. Study of selected topics of sociological interest. Reading, discussion, and development of culminating project. May be repeated for credit. Individual contract with supervising faculty member. Letter grading.


199. Directed Research in Sociology. (2 to 4) Tutorial, one hour. Preparation: 3.0 grade-point average in major. Requisite: courses 1, 198A. Limited to junior/senior Sociology majors. Independent intensive study designed for students who want to do research under guidance of faculty mentor. Scheduled meetings to be arranged between faculty member and student. Culminating paper or project required. May be repeated for maximum of 8 units, with no more than 4 in any one term. Individual contract required; see undergraduate counselor. P/NP or letter grading.

Graduate Courses

201A-201B-201C. Proseminars: Sociology. (2-2-2) Seminar, two hours every other week. 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-centered orientation. In Progress (202A) and S/U or letter (202B) 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 sources of change in 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 family life. S/U or letter grading.

206. Understanding Fertility: Theories and Methods. (4) Same as Community Health Sciences M222.) Lecture, three hours. Preparation: one formal course in demography or biostatistics. Examination of sources of change in fertility patterns, demographic theories, and methods to describe fertility trends and differentials and social and proximate determinants of fertility, with em-
phasis on understanding key proximate determinants. For advanced students interested in population, demography of health, and social demography. Letter grading.


210A-210B. Intermediate Statistical Methods I, II. (4-4) Lecture, three hours; discussion, two hours. Intermediate statistical methods using computers: probability theory, sampling, hypothesis testing, interval estimation, multiple regression and correlation, experimental design, analysis of variance and covariance, contingency tables, sampling theory. S/U or letter grading.

210C. Intermediate Statistical Methods III. (4) Lecture, four hours. Requisite: course 210B. Survey of advanced statistical methods used in social research, with focus on problems for which classical linear regression analysis may not be adequate, including categorical data, structural equations, longitudinal data, incomplete and erroneous data, and complex samples. S/U or letter grading.

211A-211B. Comparative and Historical 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 theory and fact to social sciences, logic of comparative and historical analysis, and substantive paradigms of comparative and historical analysis. Reading involves methodological examination of basic works in representational problem areas. 211B. Research Techniques. Requisite: course 211A. Topics include problem of evidence, quantitative and qualitative data. Techniques of data analysis, including use of manuscript census, content analysis, collective biography, and secondary analysis.

212A-212B. Quantitative Data Analysis. (4-4) Lecture, three hours. 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 courses, culminating in term paper in style of American Sociological Review or similar journal article. Topics include simple tabular analysis, log-linear analysis, ordinal least squares regression, robust regression, and nonparametric logistic regression, and scale construction. Logic of analysis and problems of statistical inference, including diagnostic procedures and methods for handling complex sample survey data. In Progress (212A) and S/U or letter (212B) grading.

212C. Study Design and Other Issues in Quantitative Data Analysis. (4) Lecture, three hours. Designed for graduate and undergraduate students who have had some exposure to statistics and quantitative methods. Introduction to study design, including experimental, longitudinal, cohort, time-series designs, contextual, and other designs. Discussion of suitability of various design classes for specific analytic goals, as well as their comparative strengths and weaknesses. S/U or letter grading.

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.

216A-216B. Survey Research Design. (4-4) Lecture, 90 minutes; discussion, 90 minutes. Requisite: course 210A. History of survey method; facet methodology and contingency tables; item design; scales, indices techniques; data collection—planning and management; network, snowball, and experience sampling; multistage probability sampling, stratification and clustering. Students participate in survey research project. Letter grading.


217B-217C. Ethnographic Fieldwork. (4-4) Seminar, three hours. Recommended requisite: course 217A. Theories and methods of ethnographic fieldwork. Kinds of problems amenable to ethnographic approaches, methods, and techniques for doing fieldwork, and ethical 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 experience of the self, embodied interactive 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.


223. Phenomenological and Interactionist Perspectives on Selected Topics. (4) Lecture, three hours. Comparison of phenomenological and symbolic perspectives by examining particular body of live or currently unresolved substantive issues. Topics vary; attention development of phenomenological and interactionist thought in topic of concern, with special concern for ambiguities and divergences both within and between two approaches. When relevant, attention to logics of phenomenology and interactionism of pragmatist, existentialist, and ordinary language philosophies. 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.

228. Critical Issues in Macrosociology. (4) Lecture, three hours. Conceptual introduction to area of macrosociology in which exemplary works are read, studied for substance and methods, and critiqued in seminar and in written papers. S/U or letter grading.

229A. Sociology of Interpersonal Conflict. (4) Lecture, three hours; discussion, two hours. Origins, development, and outcomes of interpersonal conflicts and traits that attract and repel individuals, households, workplaces, and public places in contemporary societies. Concurrently scheduled with course C146. Letter grading.

229B. People-Processing Institutions. (4) Lecture, three hours; discussion, two hours. Course C229A is not requisite to 229B. Theory and research analyzing operation and decision-making processes of variety of people-processing institutions, including police, 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 research in area of comparative 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 sociological sociology of race and ethnicity and ability 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 social classifications such as ethnicity and nationality) as it does at level of research. Exploration of cases from wide variety of countries, including Australia, Brazil, Colombia, Dominican Republic, Haiti, Mexico, modern China, modern Japan, Nazi Germany, Nicaragua, Rwanda, South Africa, Sudan, and U.S. S/U or letter grading.

232. Class, Politics, and Society. (4) Lecture, four hours. Nature of class structure and how it affects relations 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 “globalization” tendencies 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. Social History 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.

235. Theories of Ethnicity. (4) Lecture, one hour; discussion, two hours. Designed for graduate students. Examination of variety of theoretical approaches in understanding race and ethnicity in contemporary societies, with emphasis on recent debates among class analysis, pluralism, primitivism, and rational choice perspectives. S/U or letter grading.

236A-236B-236C. International Migration. (4-4-4) Lecture, three hours. S/U or letter grading.

236A. (4) Lecture, three hours. Comprehensive overview of key current theoretical debates in study of international migration, with focus on exploration of possibilities of comparative (historical and cross-national) research program in field, linking North American, European, and other global experiences of immigration. S/U or letter grading.

236B. (4) Lecture, three hours. Further exploration of key current theoretical debates in study of international migration, with emphasis on exploring both theoretical debates of the field and empirical data and case studies on which those debates hinge, to encourage students to undertake research in the 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 Comparsive Social Analysis. (2) Seminar, two hours. Designed for graduate students. Emphasis on one issue of particular importance for 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. S/U grading.

M238. Feminist Theory. (4) (Same as Women’s Studies M238.) Seminar, three hours. Designed for graduate students. Analysis of current American feminist theory relevant to sociologists. Exploration of critiques of reproductive feminism from poststructuralists 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. Quantitative Research on Social Stratification and Social Mobility. (4–4) Lecture, three hours. Prerequisites: 210A, 210B. Introduction to English language research literature on quantitative social stratification and social mobility in the U.S. and abroad. In Progress 239A and letter 239B grading.

241. Theories of Gender in Society. (4) Lecture, one hour; discussion, two hours. Gender stratification, gender structure in society, and overall structural organization of single organizations. Concepts, current exemplars of research that utilize these concepts, and critical reflection on research traditions. Letter grading.

242. Analysis of Data with Qualitative and Limited-Duration Qualitative Variables. (4) Same as Statistics M211.) Lecture, three hours. Requisites: courses 210A and 210B, or Statistics 101A, 100B, and 100C. Models for binary, polytomous, and ordered outcomes; censored and truncated dependent variables; sample selection bias and qualitative response models; count outcomes; multilevel models; log-linear models. S/U or letter grading.

244A–244B–244C. Conversation Analysis I II, III. (6-6-6) Lecture, four hours; discussion, two hours. Requisite: course 244A. Continuation of introduction to some structures basic to organization of conversational interaction: turn-taking organization and sequence organization. S/U or letter grading.

252. Selected Topics in Sociology of Gender. (4) Same as Women’s 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.

254. Human Capital, Social Capital, and Cultural Capital. (4) Lecture, three hours. Designed for graduate students. Intellectual history of these concepts, points of difference and similarity 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) (Same as Women’s Studies M255.) Seminar, three hours. 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-cultural? S/U or letter grading.


267. Demography of Marriage Formation and Dissolution. (4) Discussion, three hours. Requisites: course 210A. Extensive and intensive critical examination of major approaches to analysis of marriage formation and dissolution, with focus primarily on demographic literature. S/U or 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. Social Structure and Economic Change: Historical and Comparative Perspectives. (4) Lecture, four hours. S/U or letter grading.


262. Selected Problems in Urban Sociology. (4) Same as Afro-American Studies M260C.) Seminar, 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 Conversation. (4) Lecture, three hours. Requisites: courses 244A, 244B, and 244C. Seminar course. Consultant 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, two hours. Recommended preparation: at least one year of methods courses. Selected problems in interpretation of sociology and psychoanalysis, which may be substantive (group development, interpersonal relations, collective behavior) or methodological; latter focuses on critical fieldwork and experimental use of psychoanalytic and sociological techniques. S/U or letter grading.

270. Interdisciplinary Relationship Science. (4) Lecture, three hours. Limited to graduate students. Diverse approaches to relationship science in fields of anthropology, education, psychology and sociology. Topics focus on theories of understanding biologic, behavioral, and cultural aspects of relationshipships 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.

272. Topics in Political Sociology. (4) Lecture, four hours. S/U or letter grading.


276. Selected Topics in Sociology of East Asia. (4) Lecture, three hours. Designed for graduate students. Selected problems in China, or in China and Japan comparatively. Possible topics include (1) China’s Great Proletarian Cultural Revolution, (2) internal construction of Chinese society: male/female relations, city and countryside, minority nationalities, class struggle under socialism, etc., (3) China and Japan: two models of development. S/U or letter grading.

277. Sociology of Latin America. (4) Lecture, one hour; discussion, two hours. Designed for graduate students. Seminar on selected topics in sociological study of Latin America. Possible topics include social movements, race and ethnicity, stratification, and social development. Letter grading.

278. Trafficking, Gender, Health, and Human Rights. (4) (Same as Law M577.) Seminar, four hours. Review and critical assessment of diverse literature on international traffic of persons on significance of sociological, legal, and gender aspects of trafficking. Primary focus on trafficking for sex work and slavery lines between commercial sex trade and trafficking. Additional issues include role of political and economic transition, militarization, health implications of trafficking, trafficking for nonsexual purposes, and role of state.
284. Topics in Mental Health and Illness. (4) Lecture, two to three hours. Requisite: course 148. Designed for undergraduates. May be repeated for credit. S/U or letter grading.


287. Topics in Chinese Society. (4) Seminar, three hours. Preparation: at least two upper division courses on China in a disciplines 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.

288A–288B–288C. Mental Health Services for Persons with AIDS. (4–4–4) Lecture, four hours. Designed for graduate students. Analysis of current research on mental health service systems for persons with AIDS. S/U grading.

289A–289B. Practicum in Conversation Analysis. (2-4) Requisites: courses 244A, 244B. S/U grading. 289A. Daily 60-minute, three 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 and to discuss in small groups critical issues in conversational analysis. S/U grading.

M290A-M290B. Immigration, Racial Change, and Education in 21st-Century Metropolises. (4-) (Same as Education M290A-M290B, Political Science M287A-M287B, and Public Policy M290A-M290B.) Seminar, four hours. Examination of metropolitan American society and institutions at beginning of 21st century. Concentration on 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 and 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. Vast economic transformations, brought about by globalization of workplace and dramatic decline of industrial employment in advanced nations, not only greatly raise stakes in creating equal opportunity but also cut off what were previously extremely important parts of intergenerational mobility. In Progress (M290A) and later (M290B) grading.


295. Working Group in Sociology. (1 to 4) Discussion, two hours. Variable topics, including sociology of gender, ethnicity, social networks, race, class, and social demography and stratification. Advanced study and analysis of current topics in specialized areas of sociology. Discussion of current research and literature in research specialty of faculty member teaching course. May be repeated for credit. S.U. or letter grading.

M296A–M296B. Social Theory and Comparative History. (4-) (Same as History M293A-M293B and Political Science M290A-M290B.) Seminar, three hours and one-half hour every other week. Introduction to historically rooted social theory and theoretically sensitive history, following program of Center for Social Theory and Comparative History. Course may be taken independently for credit. S.U. or letter grading.

M296C. Theories in Cultural History. (4) Same as History M203C. Discussion, three hours. Introduction to social, linguistic, semiotic, or other new interpretative theories and practices developed in other fields and applied to historical material. Letter grading.

C297. Urban and Suburban Sociology. (5) ( Formerly numbered 297.) Seminar, three hours. 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 as it began in early 19th century and still continues. Analysis of city politics, house and architectural styles, crime, urban terror, public housing and ghettos, segregation and integration of neighborhoods, question of gentrification, immi- gration, urban culture (especially museums, and movie and music industries), and environmentalism. Concurrently scheduled with course C191N. Letter grading.

298. Workshop in Culture and Society. (4) Seminar, two hours every other week. Interdisciplinary workshop for graduate students and faculty pursuing theory and research in topics related to interplay of culture and society; whether scholarly, literary, or philosophical in nature. 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 apprentice ship under active guidance and supervision of regular faculty member responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.


375. Supervised Teaching of Sociology. (2) Seminar, two hours. Preparation: appointment as teaching assistant in Sociology Department. Special course for teaching assistants designed to deal with problems and techniques of teaching introductory sociology. 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.


South Asian Studies

Interdisciplinary Minor

College of Letters and Science

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Akhl Gupta, Ph.D., Chair

Faculty Committee

Anurima Banerji, Ph.D. (World Arts and Cultures/ Dance)
Nile S. Green, Ph.D. (History)
Akhl Gupta, Ph.D. (Anthropology)
Stephanie W. Jamison, Ph.D. (Asian Languages and Cultures)

Gyanam Mahajan, Ph.D. (Asian Languages and Cultures)
Purnima Manekar, Ph.D. (Asian American Studies, Women's Studies)
Saloni Mathur, Ph.D. (Art History)
Aamir R. Mufti, Ph.D. (Comparative Literature)
Vinit Nugas, Ph.D. (Urban Planning)
Gregory R. Schopen, Ph.D. (Asian Languages and Cultures)
Aparna Sharma, Ph.D. (World Arts and Cultures/ Dance)
Monica L. Smith, Ph.D. (Anthropology)

Scope and Objectives

The minor in South Asian Studies seeks, through multidisciplinary approaches, to address the history and contemporary importance of South Asia, which is comprised of Sri Lanka, India, Pakistan, Nepal, Bhutan, Bangladesh, and the Maldives, and accounts for nearly 1.5 billion people.

Studying South Asia as a region exposes students to the rich historical, cultural, and religious diversity of a major center of civilization. South Asia is the birthplace of half of the world’s religions, including Buddhism, Hinduism, Sikhism, and Jainism, India, Pakistan, and Bangladesh together have more Muslims than the Middle East, and South Asian Islam, interacting with the other faiths of the subcontinent, has seen an efflorescence of philosophy, theology, poetry, and art.

South Asia is emerging as an important node in the global economy as a center of high technology and manufacturing. It is also important as a regional power, a contributor to world literature and film, and a seedbed for philosophy and social activism.

Undergraduate Study

South Asian Studies Minor

The South Asian Studies minor is designed for students who wish to augment their major with a concentration study of the history, culture, society, and languages of South Asia. The minor includes the introductory study of one South Asian language, one lower division course on South Asian history, and five upper division courses that focus on some aspect of the history, culture, politics, religions, and artistic heritage of South Asia.

To enter the minor, students must be in good academic standing with a 2.0 grade-point average or better and have completed 45 units and at least one lower division course (other than a language course) in South Asian studies.

Required Lower Division Courses (10 units maximum): History 9A and completion of the third term of either Hindi (Hindi-Urdu 3 or 3R) or Sanskrit (South Asian 110C) or by demonstrated proficiency as determined by a placement examination. Proficiency in other South Asian languages, such as Gujarati, Bengali, Marathi, Tamil, Telugu, Pashto, or Urdu, may be accepted by petition, pending completion of a placement examination to be administered at UCLA or approval of an alternative and recognized course of language study.
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Required Upper Division Courses (20 units minimum): Five courses, with no more than two from any single discipline or department, to be selected from Anthropology 116, Art History 114A, 114D, C115A, C180C, Asian 151, 162, 163, 164, Asian American Studies M172A, Ethnomusicology 146, 147, History 174A through 174E, 175A, M175B, 175C, 185B, 185C, Islamics 110, 130, 151, South Asian 115, 150, 175, 185.

Variable or selected topics courses fulfill minor requirements only when the content focuses substantially on South Asia. Other courses with substantial South Asian content of at least 50 percent (as determined by the course instructor) may be applied only with prior approval of a petition filed with the academic counselor. Up to 12 units taken through a study abroad program may be applied toward the minor, though no more than 8 of the units may be applied toward the 20 units of upper division coursework.

Independent studies courses (197 or 199) may not be applied toward the minor. No more than one upper division course may be applied toward both this minor and a major or minor in another department or program.

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.

SOUTHEAST ASIAN STUDIES

Interdepartmental Program
College of Letters and Science

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http://www.international.ucla.edu/idps/seasia/

George E. Dutton, Ph.D., Chair

Faculty Committee
Victor Bascara, Ph.D. (Asian American Studies)
George E. Dutton, Ph.D. (Asian Languages and Cultures)
Lieba E. Tyler, Ph.D. (Geography)
Patrick C. Heuveline, Ph.D. (Sociology)
Douglas W. Hollan, Ph.D. (Anthropology)
Thu-huong Nguyen-Vo, Ph.D. (Asian Languages and Cultures)
Geoffrey Robinson, Ph.D. (History)
Michael L. Ross, Ph.D. (Political Science)

Scope and Objectives

The Southeast Asian Studies major and minor approach Southeast Asia as a region of deep local particularities and transregional engagements. This includes the study of present-day countries of Burma, Thailand, Cambodia, Laos, Vietnam, Malaysia, Indonesia, the Philippines, Singapore, Brunei, and East Timor. This is a massively heterogeneous grouping of societies, ethnicities, languages, cultures, histories, and environments.

In addition to the prominence of the region in many recent international issues (democratization, the Cold War, decolonization, global capital flows, natural resource and environmental regulation, ethnic tensions, etc.), Southeast Asia is also a prominent site for reflection on enduring questions about culture and human diversity. Southeast Asia is taught as a region, with emphasis on the particular languages, cultures, politics, and topographies of individual nations, ethnic groups, subnational regions, and associations. Yet, it is nearly impossible to teach about any part of Southeast Asia without at least occasionally engaging a range of transregional connections that date back to ancient times. Historically, the peoples of Southeast Asia have been engaged with each other as well as with India and China, the Middle East, Europe, and the Americas and with global contexts of economics, politics, migrations, and communications. When approached from the point of view that holds Southeast Asia to be a focus of shifting transactions and human connections (rather than a reified and timeless region of common culture), the study of the region speaks powerfully to critical issues across many disciplines. Thus construed, Southeast Asian studies addresses major contemporary concerns in the humanities, social sciences, arts, business, the professions, government policy, and international affairs.

Undergraduate Study

Southeast Asian Studies B.A.

The major is designed for students who are deeply interested in the study of Southeast Asian languages, cultures, and societies. It requires the intermediate-level study of one Southeast Asian language, three lower division core courses on Southeast Asia as a region, and at least 14 upper division courses, including a capstone senior seminar. Majors are expected, whenever possible, to study for at least one term at a university in Southeast Asia.

Admission

To enter the major, students must (1) be in good academic standing (minimum 2.0 grade-point average), (2) have completed 45 units and at least one lower division core course in Southeast Asian studies, and (3) meet with the academic counselor in 10357 Bunche Hall.

Preparation for the Major

Required: History 9E, Southeast Asian Studies 1, 88; completion of six terms of either Filipino 1 through 6, Indonesian 1 through 6, Thai 1 through 6, or Vietnamese 1 through 6 or demonstrated proficiency as determined by a placement examination. Proficiency in other Southeast Asian languages may be accepted by petition, pending completion of a placement examination or approval of an alternative course of language study.

Transfer Students

Transfer applicants to the Southeast Asian Studies major with 90 or more units must complete the following introductory courses prior to admission to UCLA: either one course on Southeast Asia or one year of study of a Southeast Asian language (or demonstrated equivalency). Refer to the UCLA Transfer Admission Guide at http://www.admissions.ucla.edu/prospect/adm_tr.htm for up-to-date information regarding transfer selection for admission.

The Major

Required: At least 14 upper division courses (56 units) must be completed, including 10 courses that must have substantial Southeast Asian content, as follows:

Three humanities and arts courses must be selected from Art History 114F, Dance 112B, Ethnomusicology C159, 161B, 161H, 161M, Indonesian 100A, 100B, 100C, Southeast Asian 130, 135, 170A, 170B, 170C, Thai 100A, 100B, 100C. Theater 102B, Vietnamese 100A, 100B, 100C. For Ethnomusicology 161B, 161H, and 161M to count as one 4-unit upper division course to be applied toward the major, any two of the courses may be taken once or any one course may be taken twice.

Three social sciences and policy courses must be selected from Anthropology 175U, Asian American Studies 133, 134, M164, M171D, 171E, History 176A through 176E, 177A, 177B, 191M, Political Science 158, Southeast Asian 157.

Variable or selected topics courses (e.g., Asian American Studies 191) fulfill major requirements only when the content focuses substantially on Southeast Asia or a subregion of it.

All majors must also successfully complete Southeast Asian Studies 191.

Three elective courses must be selected from the courses listed above and from those offered by the program. Other courses with substantial Southeast Asian content may be applied toward the major pending approval of a petition filed with the academic counselor.

Breadth and Methods Requirement

Four additional upper division courses on topics outside Southeast Asia must be taken to satisfy the breadth and methods requirement. The courses must be selected in consultation with and approved by the academic counselor. The requirement can be fulfilled by one of the following options:

1. Completing at least 16 units that focus on a single geographical region other than Southeast Asia (e.g., East Asia, South Asia, Europe, Middle East). All four courses must focus on the same country or region. This track provides students with an opportunity to analyze Southeast Asia from a comparative geographic perspective.

2. Completing at least 16 units with a single topic of study relevant to Southeast Asia (e.g., religion, economic development, gender studies, human rights, diasporic...
Admission
To enter the honors program, students must (1) have completed Southeast Asian Studies 1 and 88, (2) have a 3.5 grade-point average in the major and a 3.5 overall GPA, and (3) obtain agreement from a faculty member to supervise their honors thesis. Application should normally be made during the junior year, after students have completed more than 90 units of coursework. Consult the academic counselor for further details about the application, thesis requirements, and rules regarding the selection of a faculty thesis adviser.

Requirements
After a faculty adviser has been selected and has agreed to advise them during the year-long project, students must complete the Southeast Asian Studies Honors Program Application and a two-page preliminary outline of the proposed research project, have the faculty adviser sign the application, and submit both to the academic counselor who verifies that the necessary signatures have been obtained and the requisites have been met. The counselor assists the students in formally enrolling in Southeast Asian Studies 198A. Enrollment in subsequent terms (courses 198B and 198C) is contingent on students having demonstrated satisfactory progress toward writing of the honors thesis.

Throughout the three terms of the honors program, students work closely with their faculty adviser who guides them through the various phases of research. At the end of the third term, students submit the thesis to their faculty adviser for final review.

To graduate with departmental honors, students must (1) complete all requirements for the major with a cumulative grade-point average of 3.5 or better in upper division courses required for the major and an overall GPA of 3.5 or better, (2) complete courses 198A, 198B, and 198C, and (3) produce an honors thesis (approximately 40 to 60 pages) determined to be of honors quality by a committee of three faculty members. The thesis must then be submitted to the academic counselor in 10357 Bunche Hall.

To graduate with departmental highest honors, students must (1) complete all requirements for the major with a cumulative grade-point average of 3.75 or better in upper division courses required for the major and an overall GPA of 3.5 or better, (2) complete courses 198A, 198B, and 198C, and (3) produce an honors thesis (approximately 40 to 60 pages) determined to be of highest honors quality by a committee of three faculty members. The thesis must then be submitted to the academic counselor in 10357 Bunche Hall.

Departmental honors and highest honors are recorded on the final transcript and diploma after students successfully complete 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 language, culture, and society in Southeast Asia. The minor includes the introductory study of one Southeast Asian language, two lower division core courses on Southeast Asia as a region, and five upper division courses that may focus on one or more Southeast Asian cultures or societies.

To enter the minor, students must (1) be in good academic standing (minimum 2.0 grade-point average), (2) have completed 45 units and at least one lower division nonlanguage preparatory course in Southeast Asian studies, and (3) meet with the academic counselor in 10357 Bunche Hall.

Required Lower Division Courses (13 units): History 9E, Southeast Asian Studies 1, and completion of Filipino 3, Indonesian 3, Thai 3, or Vietnamese 3 or demonstrated proficiency as determined by a placement examination. Proficiency in other Southeast Asian languages may be accepted by petition, pending completion of a placement examination or approval of an alternative course of language study.

Required Upper Division Courses (20 units): Five courses, with (1) at least two humanities and arts courses selected from Art History 114F, Dance 112B, Ethnomusicology C159, 161B, 161H, 161M, Indonesian 100A, 100B, 100C, Southeast Asian 130, 135, 170A, 170B, 170C, Southeast Asian Studies 191, Thai 100A, 100B, 100C, Theater 102B, Vietnamese 100A, 100B, 100C and (2) at least two social sciences and policy courses selected from Anthropology 175U, Asian American Studies 133, 134, M164, M171D, 171E, History 176A through 176E, 177A, 177B, 191M, Political Science 158, Southeast Asian 157.

For Ethnomusicology 161B, 161H, and 161M to count as one 4-unit upper division course to be applied toward the major, any two of the courses may be taken once or any one course may be taken twice.

Variable or selected topics courses (e.g., Asian American Studies 191) fulfill minor requirements only when the content focuses substantially on Southeast Asia or a subregion of it. Other courses with substantial Southeast Asian content may be applied pending approval of a petition filed with the academic counselor.

Independent studies courses (197 or 199) may not be applied toward the minor. No more than two upper division courses may be applied toward both this minor and a major or minor in another department or program.

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.

Southeast Asian Studies
Lower Division Courses
1. Introduction to Southeast Asian Studies. (5) Lecture, three hours; discussion, one hour (when scheduled). Introductory survey of diverse and dynamic societies of contemporary Southeast Asia, with strong focus on interdisciplinary themes in humanities and cultural studies. P/NP or letter grading.
88. Sophomore Seminars: Introduction to Interdisciplinary Study of Southeast Asia. (5) Seminar, three hours. Limited to majors. Introduction to methods of interdisciplinary and comparative study, providing students with opportunity to develop competence in using those approaches through investigation of critical issues in Southeast Asian studies. Culminating paper or project may be required. Letter grading.

Upper Division Courses

180. Research Seminar: Southeast Asian Studies. (4) Seminar, three hours. Limited to Southeast Asian Studies majors and minors. Designed for students to analyze their experiences after they return from study abroad in Southeast Asia. Culminating paper or project required. Letter grading.

188. Special Courses in Southeast Asian Studies. (4) Lecture, three hours; discussion, one hour. Interdepartmentally sponsored experimental or temporary courses on selected contemporary topics in Southeast Asian studies taught by visiting instructors or affiliated faculty member. May be repeated for credit with topic change. P/NP or letter grading.

191. Senior Seminar: Variable Topics in Southeast Asian Studies. (4) Seminar, three hours. Limited to senior majors. Research seminar on selected topics. Examination of literature and/or state of field in Southeast Asian studies. Capstone course for majors who write substantial literature review or paper based on original research. May be repeated once for credit with topic change and consent of chair. Letter grading.


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 B.A., M.A., or Ph.D. 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.

The department's courses are primarily designed to serve the five B.A. programs: B.A. in Spanish, B.A. in Spanish and Community and Culture, B.A. in Spanish and Linguistics, B.A. in Spanish and Portuguese, and B.A. in Portuguese, as well as to prepare students for its three graduate programs: M.A. in Spanish, M.A. in Portuguese, and Ph.D. in Hispanic Languages and Literatures. The courses are also functionally supportive of such interdepartmental programs as the B.A. program in Chicana and Chicano Studies, B.A. and M.A. programs in Latin American Studies, and M.A. and Ph.D. programs in Comparative Literature.

Undergraduate Study

One of the majors in the Spanish and Portuguese Department is a designated capstone major: Spanish and Community and Culture. 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 differences, and ability to perform scholarly presentations that tie current issues to research and theory.

Undergraduate Courses

Spanish 1 through 3 use Castells’ Mosaicos. 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 must take the departmental placement examination. Consult the Schedule of Classes or the department office for test dates and location.

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 B.A.

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 at http://www.admissions.ucla.edu/prospect/adm_tr.htm for up-to-date information regarding transfer selection for admission.

The Major

Required: (1) Two core courses (Spanish 119 and 120), (2) eight upper division Spanish elective courses in literature, culture, linguistics, media, service learning, or interdisciplinary studies, up to two of which may be from an outside department that deals with Spain or Spanish America and have been approved by the undergraduate adviser, and (3) one senior capstone seminar.

Spanish and Community and Culture B.A.

Capstone Major

Preparation for the Major

Required: Spanish 25 or 27, 42, 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 Community and Culture 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 at [http://www.admissions.ucla.edu/prospect/adm_tr.htm](http://www.admissions.ucla.edu/prospect/adm_tr.htm) 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, 155, 160, 170, 175, 195; (3) two interdisciplinary studies courses selected from Chicana and Chicano Studies 100SL, M106, M119, M120, M121, M122, M131, 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 B.A.**

**Preparation for the Major**

**Required:** Spanish 25 (or 27), M35 (or Linguistics 20), 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 American civilization course.

Refer to the UCLA Transfer Admission Guide at [http://www.admissions.ucla.edu/prospect/adm_tr.htm](http://www.admissions.ucla.edu/prospect/adm_tr.htm) 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 B.A.**

**Preparation for the Major**

**Required:** Spanish 25 or 42 or 44 or equivalent, Portuguese 3 or 102B, 46 or equivalent.

**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 at [http://www.admissions.ucla.edu/prospect/adm_tr.htm](http://www.admissions.ucla.edu/prospect/adm_tr.htm) for up-to-date information regarding transfer selection for admission.

**The Major**

**Required:** (1) Four upper division language and linguistics courses: Portuguese 100A, 100B, 105, Spanish 105; (2) four upper division literature courses selected as follows: two courses from Spanish 119A, 119B or from 120A, 120B, 120C and two courses from Portuguese 120A, 120B or from 130A, 130B; (3) six upper division electives, three of which must be in Spanish and three in Portuguese (numbered C124 and above). Only upper division courses taught in the target language may be applied toward the major.

**Portuguese B.A.**

**Preparation for the Major**

**Required:** Portuguese 3, M35, 46, Spanish 42 or 44, 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 at [http://www.admissions.ucla.edu/prospect/adm_tr.htm](http://www.admissions.ucla.edu/prospect/adm_tr.htm) for up-to-date information regarding transfer selection for admission.

**The Major**

**Portuguese Language and Literature Concentration**

**Required:** Thirteen upper division courses, including Portuguese 100A, 100B, 105, either 120A and 120B, or 130A and 130B, and eight elective courses in Portuguese, or six electives in Portuguese plus two courses from areas that complement the program approved by the undergraduate adviser in Portuguese.

**Portuguese and Linguistics Concentration**

**Required:** Completion of six terms of study in one other foreign language or three terms in each of two other foreign languages, in addition to the preparation for the major courses. Spanish is recommended.

The concentration consists of 13 upper division courses, including Portuguese 100A, 100B, 105, M118A, M118B, Linguistics 100, 103, 110, 120A, 120B, and three electives, two of which must be in Luso-Brazilian literature.

**Double Majors**

Through judicious use of electives, students may find it possible to secure the B.A. degree with two complete majors (e.g., Portuguese/Spanish, Spanish/History, Portuguese/Sociology, etc.). Interested students should consult the undergraduate adviser in Portuguese as early as possible in their B.A. 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 honors program is open to all departmental majors who have completed the required nine upper division core courses with a 3.5 grade-point average. Eligibility is verified by the departmental counselor.

Two honors projects and an honors thesis are required. To graduate with departmental honors, students must first complete an honors project in each of two of their upper division Spanish elective courses. The honors project is a 12- to 15-page term paper on a special topic, selected in consultation with the instructor, to be completed in addition to the normal course requirements. On the basis of the coursework and special interests, students then consult a faculty member in that field and formulate a research project that they pursue under the faculty member's guidance through Spanish 198. Students research and write an honors thesis (not to be confused with an honors project) of approximately 25 pages on the selected topic. Approval of the honors thesis is the final requirement for departmental honors.

**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 6A, 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, 114Q, Chicana and Chicano Studies M102, M108A, 120, M125, 132, 142, 172, 184, Ethnomusicology M108A, Geography 181, History 157B, 160B.

No more than two upper division courses may be applied toward both this minor and a major or minor in another department or program. By
petition and after consultation with the undergraduate adviser, one 4-unit 197 or 199 course may be applied toward 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.

Portuguese Minor
To enter the Portuguese minor, students must have an overall grade-point average of 2.0 or better and must complete Portuguese 3 or 102B.

Required Lower Division Courses (4 units): Portuguese 46.

Required Upper Division Courses (24 units): Portuguese 105 and five Portuguese courses selected from 100A through 199 (except 102A, 102B). Only one 4-unit Portuguese 197 or 199 course may be selected.

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, http://www.gdnets.uc.edu/gasaa/library/pgmgrrk.htm. 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 degree in Spanish, Master of Arts degree in Portuguese, and Candidate in Philosophy (Ph.D.) degrees in Hispanic Languages and Literatures.

Portuguese
Lower Division Courses
1. Elementary Portuguese. (4) Discussion, five hours; laboratory, one hour. P/NP or letter grading.
2. Elementary Portuguese. (4) Discussion, five hours; laboratory, one hour. Enforced requisite: course 1P/NP or letter grading.
3. Intermediate Portuguese. (4) Discussion, five hours; laboratory, one hour. Enforced requisite: course 2P/NP or letter grading.
4. Spanish and Portuguese / 595
5. Portuguese Conversation. (2-2) Discussion, three hours. Enforced requisite: course 3 with grade of B or better. P/NP or letter grading.


M35. Spanish, Portuguese, and Nature of Language. (3-4) Same as Spanish M35. Lecture, three hours: discussion, one hour. Introduction to language study within context of Romance languages, focusing 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.


46. Brazil and Portuguese-Speaking World. (5) Lecture, four hours; discussion, one hour (when scheduled). Taught in English. Topical analysis of cultural history of Brazil in context of Portuguese-speaking world, with emphasis on comparative, trans-Atlantic relations, social development, and artistic manifestations. P/NP or letter grading.

Upper Division Courses

C135. 20th-Century Brazilian Literature. (4) Lecture, three hours. Requisite: course 105. Study of representative trends and authors. May be repeated for credit with topic change. Concurrently scheduled with course C235. P/NP or letter grading.

141. Brazilian Film and Literature. (4) Lecture, three hours. Taught in English. Topical analysis of main literary and historical themes of Brazilian culture, through films and literary texts. P/NP or letter grading.

191. Undergraduate Variable Topics Seminars: Portuguese. (4) Seminar, three hours. Requisite: course 105. Research seminar on selected topics in Portuguese. Reading, discussion, and development of culminating project. Consult Schedule of Classes or department counselor for topic to be offered in specific term. 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. Individual 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.

199. Directed Research in Portuguese. (2 to 4) Tutorial, to be arranged. Requisite: course 105. 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 M200.) 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 prerequisite to 204B. Generative approach to the Portuguese language, with some consideration of bearing of syntax, etymology, and phonology on style, metaphor, and meter.

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.


C229. 20th-Century Portuguese Literature. (4) Lecture, three hours. Requisite: course 105. Study of principal representative trends and authors. May be repeated for credit with topic change. Concurrently scheduled with course C129. S/U or letter grading.

C231. Colonial Brazilian Literature and Culture. (4) Lecture, three hours. Requisite: course 105. Study of most important authors to 1830. May be repeated for credit with topic change. Concurrently scheduled with course C131. S/U or letter grading.


C235. 20th-Century Brazilian Literature. (4) Lecture, three hours. Requisite: course 105. Study of representative trends and authors. May be repeated for credit with topic change. Concurrently scheduled with course C135. S/U or letter grading.

M249. Folk Literature of Spanish and Portuguese Worlds. (4) (Same as Spanish M249.) Lecture, three hours. Intensive study of folk literature of Spanish and Portuguese cultures as represented in (1) tallied and poetry, (2) narrative and drama, (3) speech. S/U or letter grading.

M251A-M251B. Studies in Galician-Portuguese and Old Spanish. (4-4) (Same as Spanish M251A-M251B.) Lecture, 20 hours; laboratory, one hour. Study of problems related to historical development of Galician-Portuguese and Old Spanish. Each course may be repeated once with topic change and consent of appropriate guidance committee.


255. Studies in Modern Brazilian Literature. (4) Discussion, two hours. S/U or letter grading.


290. Special Topics. (4) Discussion, two hours. Designed for graduate students. Consult Schedule of Classes or department counselor for topics to be offered in a specific term. S/U or letter grading.


375. Teaching Apprentice Practicum. (1 to 4) Seminar, to be arranged. Training in English and Portuguese language teaching with emphasis on active participation, supervision, and preparation for future teaching. S/U grading.

596. Directed Individual Study or Research. (4 to 8) Tutorial, to be arranged. Study or research in areas or topics not offered as regular courses. No more than 8 units may be applied toward M.A. 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 M.A. comprehensive examination or Ph.D. 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.


Spanish

Lower Division Courses

1. Elementary Spanish. (4) Discussion, five hours; laboratory, one hour. P/NP or letter grading.

2. Reading Course for Graduate Students. (4) Lecture, three hours. Knowledge of Spanish not required. May not be applied toward degree requirements. S/U grading.

3. Elementary Spanish. (4) Discussion, five hours; laboratory, one hour. Requisite: course 2. P/NP or letter grading.

4. Advanced Spanish. (4) Lecture, 20 hours; laboratory, five hours. Concurrently scheduled with course C205A. 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.

2G. Reading Course for Graduate Students. (4) Lecture, three hours. Enforced requisite: course 1G. May not be applied toward degree requirements. S/U grading.

3. Elementary Spanish. (4) Discussion, five hours; laboratory, one hour. Requisite: course 2. P/NP or letter grading.

4. Advanced Spanish. (4) Lecture, 20 hours; laboratory, five hours. 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.


5. Intermediate Spanish. (4) Discussion, five hours; laboratory, one hour. Enforced requisite: course 4. P/NP or letter grading.


3A. Intensive Spanish. (4) Lecture, 20 hours; laboratory, 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.


9A. Advanced Conversation. (2-2) Discussion, three hours. Enforced requisite: course 8A. 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.

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 com-
prehension of a variety of forms of cultural production in Spanish language and on preparation for more advanced topics. 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 authentic 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 M35S.) Lecture, three hours; discussion, one hour. Introduction to language study within context of Romance languages, focusing 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) (Formerly numbered M42.) Lecture, three 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) (Formerly numbered M44.) Lecture, three hours; discussion, one hour. Required of majors. Lectures taught in English; discussion sections taught in either Spanish or English. High- lights 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 Quijote.

88A-88B. Lower Division Seminars. (4) Seminar, three hours. Knowledge of Spanish not essential. Variable topics courses designed to explore various themes and issues pertinent to Hispanic literature and culture. P/NP or letter grading.

97. Variable Topics in Spanish. (2) Lecture, two hours variable topics course with readings, 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. (4-4) Lecture, three hours. Requisite: course M35. 100A. Phonology and Morphology. Analysis of phonemic and morphological systems of Spanish. 100B. Syntax. Study of syntactic systems of Spanish.

102A-102B. Catalan Language and Culture I, II. (4-4) Lecture, six hours. Introduction to oral and written Catalan language. Two-termed accelerated language. (4) Semester equivalent to three terms of traditional pattern and designed for advanced undergraduate and graduate students. May not be applied as upper division elective in major. P/NP or letter grading. 102A. Prepa- ration: at least two years of college-level Spanish, Portuguese, or another Romance language other than Catalan. Preparatory: course 102A. 1011A-111B. History of Portuguese and Spanish. (4-4) (Same as Portuguese M111A-111B.) Lecture, three hours. Requisites: courses M35, 100A. Course M111A is requisite to M111B. Major features of development of Indo-European and Spanish languages from their origins in vulgar Latin to modern times. P/ NP or letter grading. 111A. Morphology; 111B. Mor- phology and Syntax.


120. History of Literature. (4) (Formerly numbered 120A.) Lecture, three hours; discussion, one hour. Requisite: 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.

130. Topics in Medieval Studies. (4) (Not same as course 130 prior to Fall Quarter 2010.) Lecture, three hours. Requisite: course 25. Exploration of medieval Iberian literatures; heroic poetry, prose, and history of the peninsula, with emphasis on its literary and linguistic diversity. Possible topics include Convivencia (peaceful coexistence), Europe and Orient, beginnings of inqui- siti on, pre-13th-century epic, and the 13th-century Christian expansion beyond the peninsula, and flowering of Al-Andalus. May be repeated for credit with topic change. P/NP or letter grading.

135. Topics in Modern Spanish Studies. (4) Lecture, three hours. Requisite: course 25. Exploration of 18th and 17th centuries, with focus on early modern period of Spain and Spanish America. Possible topics include Spanish colonial reform, response to Modern Age, transatlan- tic literary and visual baroque, race and religion in construction of early modern nation, transatlantic fic- tions, early modern identities and theatrical representa- tions, literature and theater history, Atlantic philosophy, poet- ics and poetry. May be repeated for credit with topic change. P/NP or letter grading.

140. Topics in Modern Studies. (4) (Not same as course 140 prior to Fall Quarter 2010.) Lecture, three hours. Requisite: course 25. Exploration of major liter- ary movements and writers of 18th and 19th centuries in Spain and Spanish America. Possible topics include Enlightenment, Romanticism, nation-building literature, realism and naturalism, and works by Cadalso, Con- colorcorvo, Lizarr, Larra, Sarmiento, Becquer, Isacar, Mera, Villaverde, and Galóis. May be repeated for credit with topic change. P/NP or letter grading.

1014A-10145B. Introduction to Chicano Literature. (4-4) (Same as Chicano and Chicano Studies M1014A- M1014B.) Lecture, three hours. Requisite: course 25 or 27. Introduction to texts representative of the Chicano literary tradition — Corrido, Semblanza, chronic, au- tobiography, novel, romance, and satire. Emphasis on way in which narrative forms are formed by and address social and cultural problems. P/NP or letter grading.

1046. Chicano Narrative. (4) (Same as Chicana and Chicano Studies M1046.) Lecture, three hours. Intro- duction to Chicana Chicano literary tradition — Corrido, Semblanza, chronic, auto- biography, novel, romance, and satire. Emphasis on way in which narrative forms are formed by and address social and cultural problems. P/NP or letter grading.

150. Topics in Contemporary Studies. (4) Lecture, three hours. Requisite: course 25. Exploration of main trends that characterize Chicana and Spanish American and Spanish literatures and cultures and main con- cepts used to address them. Possible topics include transculturalization and heterogeneity, race and ethnicity, gender, migration, and Chicana Chicano cultures and the literary modernization in Latin American boom, litera- ture and revolution, autobiography, women’s writing, border literature, and postmodernist fiction. May be re- peated for credit with topic change. P/NP or letter grading.

155. Topics in U.S. Latino Studies. (4) Lecture, three hours. Requisite: course 25. Exploration of the spread of Chicano Chicano culture and culture throughout North America, including literatures that are outgrowth of civil rights movements of 1960s, recent demographic changes, new transnational identi- ties, and mixed citizens. U.S. Latinos and Lati- nos. Chicano, Puerto Rican, Cuban American, Central American American, South American American, and Jewish Latino literatures may be included. May be re- peated for credit with topic change. P/NP or letter grading.

160. Topics in Spanish Linguistics. (4) Lecture, three hours. Requisite: course 25. Exploration of origin of language, how Spanish is acquired, evolution of Spanish from Latin to early modern period, how Span- ish varies in world, how to teach Spanish, Spanish in contact with other languages. Possible topics include inclusion of a variety of different definitions of literacy, programs for adult literates, literacy and gender, approaches to literacy education, first- and second-language acquisition, and language and cognition. May be repeated for credit with topic change. P/NP or letter grading.

15165SL. Taking It to Street: Spanish in Communi- ty. (3) (Formerly numbered 165SL) (Same as Applied Linguistics M165SL) Seminar, three hours; fieldwork, 10 hours. Requisite: course 25 or 27. Service learning course to give students opportunity to use cultural and linguistic knowledge acquired in classes in real-world settings. Students are required to spend mini- mum of eight to 10 hours per week at agreed on site in Latino community. P/NP or letter grading.

15217SL. Chicanas, Chicanoas, Chicano, Chicana, and Trans- historical Studies. (4) Lecture, three hours; discus- sion, one hour (when scheduled). Requisite: course 25. Exploration of the cultural and historical context of Chicana/Chicano Studies and transnational theoretical frameworks. May be repeated for credit with topic change. P/NP or lettergrading.

15217SL. Chicanas, Chicanoas, Chicano, Chicana, and Trans- historical Studies. (4) Lecture, three hours; discus- sion, one hour (when scheduled). Requisite: course 25. Exploration of the cultural and historical context of Chicana/Chicano Studies and transnational theoretical frameworks. May be repeated for credit with topic change. P/NP or lettergrading.

175. Topics in Creative Writing and Translation. (4) Seminar, three hours. Requisite: course 25. Exploration of the nature of translation and 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. Requisite: course 25 or 27. Designed as adjunct to upper division course in Chicano Chicano studies. 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 His-panic Literature and Linguistics. (4) Seminar, three hours. Limited to 15 junior/senior Spanish majors. Variable topics course with readings, papers, and development of culminating paper. Consult Schedule of Classes or department counselor for topic to be of- fered in specific term. P/NP or letter grading.

191B. Variable Topics in Spanish. Studies in His-panic Literature and Linguistics. (4) Seminar, three hours. Advanced variable topics course that studies di- verse aspects of Hispanic culture, civilization, and his-
Graduate Courses

M200. Research Resources. (4) (Same as Portuguese M200.) Lecture, three hours. Identification and use of research 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 main currents of contemporary literary theory and criticism. Letter grading.


M228. The Enlightenment. (4) Lecture, three hours. Readings of and lectures on representative works of the period. Letter grading.


M234. Spanish Drama and Poetry from 1898 to the Civil War. (4) Lecture, three hours. Readings of and lectures on representative plays and poems. Letter grading.

M235. Spanish Drama and Poetry after the Civil War. (4) Lecture, three hours. Readings of and lectures on representative plays and poems of the period. Letter grading.


M241A-241B. Contemporary Spanish-American Short Story. (4-4) Lecture, three hours. Study of important short story writers from modernism to the present. Letter grading.

M243A-243B. Contemporary Spanish-American Poetry. (4-4) Lecture, three hours. Intensive study of important poets of Spanish America from modernism to the present. Letter grading.

M244A-244B. Contemporary Spanish-American Novel. (4-4) Lecture, three hours. Study of important novelists from modernism to the present. Letter grading.


M248. Folk Literature of Spanish and Portuguese Worlds. (4) (Same as Portuguese M248.) 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. S/U or letter grading.

M251A-M251B. Studies in Galegan-Portuguese and Old Spanish. (4-4) (Same as Portuguese M251A-M251B.) Lecture, two hours. Study of problems related to historical development of Galegan-Portuguese and Old Spanish. Each course may be repeated once with topic change and consent of appropriate guidance committee. Letter grading.

M256A-256B. Studies in Spanish Linguistics. (4-4) Lecture, two hours. Study of problems in analysis and description of the contemporary Spanish language. Each course may be repeated once with topic change and consent of appropriate guidance committee. Letter grading.

M257. Studies in Dialectology. (4) Discussion, two hours. May be repeated once with topic change and consent of appropriate guidance committee. Letter grading.

M262A-M262B. 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. Letter grading.

M264A-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. Letter grading.

M270A-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. Letter grading.

M271A-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. Letter grading.

M277A-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. Letter grading.

M278A-278B. Studies in 19th-Century Spanish-American Literature. (4-4) Discussion, two hours. Each course may be repeated once with topic change and consent of appropriate guidance committee. Letter grading.

M280A-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. Letter grading.

M286A-286B. Studies in Hispanic Folk Literature. (4-4) Discussion, two hours. Each course may be repeated once with topic change and consent of appropriate guidance committee. S/U or letter grading.

M290. 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. Letter grading.

M291A-291B. Colloquial Spanish Research Group. (2-2) Research group meeting, two hours. Limited to graduate students. Discussion and analysis of colloquial manuscripts. Specific topics vary from year to year. Production of student papers for publication and/or presentation at conferences or symposia. Letter grading; 291B. Request: course 291A. May be repeated for credit. S/U or letter grading. Letter grading.

296. 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.

M299. Research Resources for European Studies. (2) Seminar: Research Methods in European Studies (M299, Italian M299, Information Studies M299, German M299, Slavic M299.) Lecture, two hours. Essentials of library research strategy and effective searching in key print and online resources for European and Russian studies. Through combination of lecture, online demonstration, and hands-on activities in and outside class, students understand how to efficiently use library and databases. 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 curricular 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 to 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 M.A. 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 M.A. comprehensive examination or Ph.D. 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.


**Speech**

See Communication Studies

**Statistics**

**College of Letters and Science**

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(310) 825-8430
fax: (310) 206-5658
http://www.stat.ucla.edu

Jan de Leeuw, Ph.D., Chair

**Professors**

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William A. Clark, Ph.D.
Susan D. Cochran, Ph.D.
Morita M. Dabrowska, Ph.D.
Jan de Leeuw, Ph.D.
Rebecka J. Emerick, Ph.D.
Sander Greenfield, Ph.D.
Mark S. Handcock, Ph.D.
Mark H. Hansen, Ph.D.
Kenneth L. Lange, Ph.D.
Edward E. Leamer, Ph.D. (Chauncey J. Medberry Professor of Management)

**Professors Emeriti**

Richard A. Berk, Ph.D.
Thomas S. Ferguson, Ph.D.
Robert I. Jennrich, Ph.D.
James B. MacQueen, Ph.D.
Robert I. Jennrich, Ph.D.
Thomas S. Ferguson, Ph.D.

**Associate Professors**

Janice L. Reiff, Ph.D.
Hongjuan Xu, Ph.D.

**Assistant Professors**

Hongjiu Lu, Ph.D.
Qing Zhou, Ph.D.

**Senior Lecturers**

Maryam M. Esfandiarlou, Ph.D.
Juana Sanchez, Ph.D.

**Lecturers**

Akmar A. Almohalwes, Ph.D.
Nicolas Christou, Ph.D.
Vivian Lew, Ph.D.
Randal R. Rojas, Ph.D.

**Adjunct Associate Professors**

Amy J. Braverman, Ph.D.
Ivaylo D. Dinov, Ph.D.

**Academic Administrator**

Robert L. Gould, Ph.D.

**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 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 Statistics 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 B.S. 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.

To enter the major, students should have successfully completed one lower or upper division Statistics Department course with a letter grade, have an overall grade-point average of 2.0 or better, and declare the Statistics major with the undergraduate adviser in 8117A Math Sciences, (310) 206-3742.
It is strongly recommended that students, in conjunction with the B.S. 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.

Preparation for 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.

Referrer to the UCLA Transfer Admission Guide at http://admissions.ucla.edu/prospect/adm_transfer 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, C151 through 199, Mathematics 131A, 131B, 151A, 151B, 170B, 171, 172A, 172B. Elective courses from outside the department are selected in consultation with the undergraduate faculty adviser.

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, 172A, 172B. 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 should have successfully completed one course from Statistics 10 through 14 with a letter grade, have an overall grade-point average of 2.0 or better, and file a petition with the undergraduate adviser in 8117A Math Sciences, (310) 206-3742.

Required Lower Division Courses (9 units):
Statistics 10 and Mathematics 31B.

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 195 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 minor requirements must be in addition to units applied toward major or minor requirements in another department or program.

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, http://www.gdnet.ucla.edu/gasasa/pgmintro.htm. 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 (M.S.), Candidate in Philosophy (C.Phil.), and Doctor of Philosophy (Ph.D.) degrees in Statistics.

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 designs, graphical and numerical summaries of data, inference, regression as descriptive tool. P/NP or letter grading.

11. Introduction to Statistical Methods for Business and Economics. (5) Lecture, three hours; discussion, one hour; computer laboratory, one hour. Requisite or corequisite: Mathematics 3A or 31A. Not open for credit to students with credit for course 10, 10H, 12, 13, 14, 100A, 100B, 100C, Mathematics 170A, or 170B. Elements of statistical analysis. Presentation and interpretation of data; descriptive statistics; theory of probability and basic sampling distributions; statistical inference, including principles of estimation and tests of hypotheses; introduction to regression and correlation. P/NP or letter grading.

12. Introduction to Statistical Methods for Geophysics and Environmental Studies. (9) Lecture, four hours; discussion, one hour; laboratory, one hour. Not open for credit to students with credit for course 10, 11, or 13. Introduction to statistical thinking and understanding, with emphasis on techniques used in geophysics 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 geophysics 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 spreadsheet methods and parametric models. P/NP or letter grading.

14. Introduction to Statistical Methods in Physical Sciences and Engineering. (5) Lecture, three hours; discussion, one hour; laboratory, one hour. Requisite: Mathematics 31A. Not open for credit to students with credit for course 10, 10H, 11, 12, or 13. Introduction to conceptual and technical aspects of statistics, with attention to applications of physical sciences and engineering. Topics include data collection and experimental design, quantifying uncertainty in measurements, descriptive statistics, introduction to time series and regression. Laboratory component to learn data analysis on real data and fundamental techniques of computer statistical analysis, including bootstrap methods. P/NP or letter grading.

35. Introduction to Probability with Applications to Poker. (4) Formerly numbered 35B. 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 both 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, 10H, 11, 12, 13, or 14. Limited to 20 lower division statistics students. Readings and discussions design 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 the 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 summarization; 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 Design and Analysis of Experiments. (4) Lecture, three hours; discussion, one hour. Requisites: course from 10, 11, 12, 13, or 14, and Mathematics 32B. 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.

101B. Introduction to Data Analysis and Regression. (4) Lecture, three hours; discussion, one hour. Requisites: course 10, Mathematics 33A. 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.
101C. Introduction to Regression and Data Mining. (4) Lecture, three hours; discussion, one hour. Enforced prerequisites: course 101B. Design for juniors. Applied regression analysis, with emphasis on general linear model (e.g., multiple regression) and generalized linear model (e.g., logistic regression). Special topics include model estimation, 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. Enforced prerequisites: course 100B, Mathematics 33A. Introduction to programming and data analysis in R. P/NP or letter grading.


103. Statistical Analysis with Missing Data. (4) Lecture, three hours. Enforced prerequisites: courses 100C or 101B. Exploration of standard methods for checking whether assumptions required for statistical model, analyze data, and report results. Weekly meetings in classroom setting to study basic con- cepts and techniques of statistical analysis. 141SL. Practice of Statistical Consulting. (4) Seminar, one hour; research group meeting, two hours. Enforced prerequisite: course 140SL. Limited to seniors. Opportunity to solve real data analysis problems for real community 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. 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). P/NP or letter grading.

105. Statistics for Engineers. (4) Lecture. Three hours; discussion, one hour. Enforced prerequisites: course 100A or Electrical Engineering 131A or Mathematics 170A. Fundamentals of descriptive and inferential statistics. Special topics include statistical design and analysis of experiments, statistical process control, and quality assurance. Statistical methodology in engineering and physical sciences, using professional software. Letter grading.

112. Statistical Methods for Social Sciences. (5) Lecture, three hours; discussion, one hour; laboratory, one hour. Enforced prerequisites: course 10. Limited to juniors/seniors. Statistical methods for analyzing social research data. Special topics include social research design; study and implementation of computer statistical programming; applications to social sciences, using professional statistical software. Letter grading.

115. Applied Sampling. (Formerly numbered C135.) Lecture, three hours; discussion, one hour. Enforced prerequisite: one course from 10, 11, 12, 13, 14, or Psychology 100A. Selected theories for quantification of variability in large populations and estimation of population characteristics. Practical application of statistical and inferential methods for planning sample surveys and experiments. P/NP or letter grading.


130. Getting Up to Speed with SPSS, Stata, SAS, and R. (4) Lecture, three hours; discussion, one hour. Enforced prerequisites: course 100B. Introduction to statistical computing and computer software for data analysis. Weekly meetings in classroom setting to study basic computational problems. Letter grading.

131. Experimental Design. (4) Lecture, three hours. Enforced prerequisites: courses 100C or 101B or 101C. Basic principles, analysis of variance, randomized block design, factorial designs, fractional factorial designs, minimum aberration designs, robust parameter designs. Concurrently scheduled with course C225. P/NP or letter grading.

153. Statistical Analysis with Missing Data. (4) Lecture, three hours. Enforced prerequisite: course 102A. Study of methods dealing with nonresponse and missing data, including use of auxiliary variables; limitations of simple methods, and modern methods for dealing with missing data, such as EM algorithm and multiple imputation. P/NP or letter grading.

154. Measurement and Its Applications. (Same as Psychology M144.) Lecture. Three hours. Enforced prerequisites: one course from 10, 11, 12, 13, 14, or Psychology 100A. Selected theories for quantification of variability in large populations and estimation of population characteristics. Practical application of statistical and inferential methods for planning sample surveys and experiments. P/NP or letter grading.

155. Applied Sampling. (Formerly numbered C135.) Lecture, three hours; discussion, one hour. Enforced prerequisite: one course from 10, 11, 12, 13, 14, or Psychology 100A. Selected theories for quantification of variability in large populations and estimation of population characteristics. Practical application of statistical and inferential methods for planning sample surveys and experiments. P/NP or letter grading.

157. Probability and Statistics in Finance. (4) Lecture, three hours. Enforced prerequisites: courses 100A and 100B, or 101B and 101C, or one course from 10, 11, 12, 13 and 14. One-half division of statistics course. Designed for social sciences graduate students and advanced undergraduate students. Topics include probability models, statistical inference, regression, analysis of variance, time series analysis, and Monte Carlo methods. P/NP or letter grading.

160. Getting Up to Speed with SPSS, Stata, SAS, and R. (4) Formerly numbered 130A.) Lecture, three hours; discussion, one hour. Enforced prerequisites: courses 100A and 100B. Basic principles of statistical computing, basic computer programming, and data handling and analysis. Applications to social sciences, using professional statistical analysis software package for data analysis. Letter grading.

161B. Seminar. (4) Lecture, three hours. Preparation: Some knowledge of basic calculus and linear algebra. Enforced prerequisites: courses 100A and 100B, or 101B and 101C, or one course from 10, 11, 12, 13 and 14. Designed for social sciences graduate students and advanced undergraduate students seeking training in data analysis and data methods employed in social sciences. Concurrently scheduled with course C216. P/NP or letter grading.

162. Foundations of Scientific Writing. (2) (Formerly numbered C183.) Seminar. One hour. Development and perfection of student written communication skills through variety of scientific writing and reading assignments. Discussion of 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.


164. Careers in Statistics. (1) Lecture, one hour. Discussion of applications of statistics by weekly guest speakers. How statistical skills, data analysis, economic decisions, arts, environment, and other fields, with some emphasis on career paths in statistics. P/NP grading.
Graduate Courses

200A. Applied Probability. (4) Lecture, three hours. Requisite: course 100A or Mathematics 170A. Limited to graduate students. Specialized treatments of probability theory, martingale, and selected topics from queuing, reliability, speech recognition, computational biology, mathematical finance, epidemiology. S/U or letter grading.


201A. Research Design, Sampling, and Analysis. (4) Lecture, three hours. Designed for graduate stu- dents. Basic principles, ANOVA block designs, factorial designs, unbalanced and numerical integration, regression, stratified sampling, and cluster sampling. S/U or letter grading.


201C. Advanced Modeling and Inference. (4) Lecture, three hours. Strongly recommended requisites: courses 200B, 201B. Designed for graduate students. Introduction to advanced topics in statistical modeling and inference, including hierarchical models, hidden Markov, generative (hidden Markov), and discriminative models, variational inference, 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.

202A. Survey of computational methods that are espe- cially useful for statistical analysis, with implementa- tions in statistical package R. Topics include matrix analysis, multivariate regression, principal component analysis, clustering, and discriminant optimi- zation methods. S/U or letter grading.

202C. Monte Carlo Methods for Optimization. (4) Lecture, three hours. Requisite: course 200B. Monte Carlo methods and numerical methods that are espe- cially useful for statistical analysis, with implementa- tions in statistical package R. Topics include matrix analysis, multivariate regression, principal component analysis, clustering, and discriminant optimi- zation methods. S/U or letter grading.

204. Nonparametric Function Estimation and Mod- eling. (4) Lecture, three hours. Requisite: course 200A. Introduction to many useful nonparametric tech- niques such as nonparametric density estimation, non- parametric regression, and high-dimensional statistical modeling. Some semiparametric techniques and func- tional data analysis. S/U or letter grading.

211. Analysis of Data with Qualitative and Limit- ed Dependent Variables. (4) Same as Sociology M242.) Lecture, three hours. Requisites: courses 100A, 100B, and 100C, or Sociology 210A and 210B. Models for categorical and dependent outcomes: logistic regression, probit regression, Cox proportional hazards, hierarchical (multilevel) models, log-linear models. S/U or letter grading.

216. Social Statistics. (4) Lecture, three hours. Preparation: some knowledge of basic 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. S/U or letter grading.


225. Experimental Design. (4) Lecture, three hours. Requisite: course 201A. Topics include analysis of variance, randomized block designs, factorial experiments, fixed and random effects, splitting the plot, confounded experiments, Latin square designs, crossover designs, balanced incomplete block designs, and factorial designs. S/U or letter grading.


231. Pattern Recognition and Machine Learning. (4) Same as Computer Science M276A.) Lecture, three hours. Designed for graduate students. Funda- mental concepts, theories, and algorithms for pattern recognition, introduction to machine learning, and data mining. Topics include Bayesian decision theory, parametric and nonparametric estimation, density estimation, clustering and pattern finding, sampling, and various data mining algorithms. S/U or letter grading.


233. Introduction to Bayesian Statistics. (4) Lecture, three hours. Preparation: one course in probability and statistics. Requisites: courses 100A and 100B, or 101B and 101C. Topics include Bayesian decision theory, parametric and nonparametric learning, clustering, complexity and computational limits, and methods for analysis of spatial data hypothesized to be generated by unmeasured latent variables, including


M244. Statistical Analysis with Latent Variables. (Same as Education M231E.) Lecture, three hours. Preparation: courses 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 lecture and hands-on laboratory exercises. Concurrently scheduled with course C155. S/U or letter grading.

M245. History of Statistics. (Same as History M220.) Lecture, three hours. History of statistics and probability theories over vast and diverse territory. Development of mathematical methods; philosophical, political, and social issues that were linked to their emergence and use. S/U or 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 points and data analysis. Letter grading.

CM248. Applied Sampling. (4) Formerly numbered C214G. Lecture, four hours; discussion, one hour. Preparation: 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, estimation and hypothesis testing. Terminology, estimation, testing, and model building considerations. Letter grading.

M250. Statistical Methods for Epidemiology. (4) (Same as Biostatistics M240E and Epidemiology M211.) Lecture, four hours. Preparation: two terms of statistics (such as Biostatistics 100A, 100B). Requisites: Epidemiology 200B, 200C. Concepts and methods tailored for analysis of epidemiologic data, with 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, trend analysis, smoothing and sensitivity analysis. S/U or letter grading.

M251. Statistical Methods for Life Sciences. (4) (Same as Ecology and Evolutionary Biology M216.) Lecture, three hours. Requisite: course 13. Fundamentals of mathematical methods and statistical procedures in life sciences, including statistical inferences for continuous and categorical data (estimation, testing of means and proportions, ANOVA) study design, linear regression, and introduction to principle components analysis. Methods to be implemented on computer with SAS. S/U or letter grading.

M254. Statistical Methods in Computational Biology. (4) (Formerly numbered M217 and M21I and Bimathematics M271.) Lecture, three hours; discussion, one hour. Preparation: elementary probability concepts. Requisites: course 100A or 203A or Bioinformatics M210. Preparation: computational methods developed and widely applied in several branches of computational biology, such as gene expression, sequence alignment, motif discovery, comparative genomics, and biological pathways, with emphasis on understanding basic statistical concepts and use of statistical inference to solve biological problems. Letter grading.

257. Design, Analysis, and Modeling for Embedded Sensing. (4) Lecture, three hours; discussion, one hour. Preparation: knowledge of probability and regression analysis. Limited to graduate students. Analysis of data produced by embedded sensing, which is product of several technological advancements in hardware and software and systems. Topics include low-power computing and communication protocols, and robot devices. S/U or letter grading.

C260. Site-Specific Topics. (4) Seminar, three hours. Tracking of invisible flows of data through great-er Los Angeles metropolitan area, with focus on specific number of sites situated prominently in both physical and virtual (data) spaces. Documentation of data that originate, terminate, or simply route through each location. Consideration of analyses (visual, computational, or simply informal), decisions that are made, and actions that are taken on basis of these data, whether they be human or automated responses. Documentation of how patterns of data acquisition and analysis dictate behaviors, enable or restrict movements, and shape local community. Alterations or addi-tions to data flows that could improve quality of life for inhabitants of or visitors to sites. May be repeated for credit; however, only one C260 may be applied toward any graduate degree. Concurrently scheduled with course C190.

C261. Introduction to Pattern Recognition and Machine Learning. (4) Lecture, three hours. Requisites: course 100B. Mathematics 33A. Introduction to pattern analysis and machine intelligence designed for advanced undergraduate or graduate students. Concurrently scheduled with course C2161. S/U or letter grading.


C285. Seminar: Computing for Statistics. (2 to 4) Seminar, one to three hours. Topics in various statistical areas by means of lectures and informal conferences with staff members. S/U grading.

M286. Seminar: Statistical Problem Solving for Population Biology. (2) (Same as Ecology and Evolutionary Biology M286.) Seminar, two hours. Designed for graduate students. Statistical solutions to 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 con-sent of instructor). With high-throughput technologies such as genomic sequencing, microarray gene expressions, Chromatin-Immunoprecipitation DNA CHIP, and mass spectrometry (MS/MS) proteomics, scientists are collecting genetic, genomic, and pathway data at rates far beyond imagination one deca-de ago. Such gigantic volumes of data produced cannot be analyzed with traditional tools or highly sophisti-cated computational methods guided by mathe-matical and statistical principles. Cutting-edge genom-ics research from statistical data analytic point of view. S/U or letter grading.


295L. Service Learning for Graduate Statistical Consulting. (Formerly numbered 291L.) Research group meeting, two hours; fieldwork, two hours. Exposure to realistic statistical 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 ba-sic statistical programs. Presentations and written re-port required. S/U or letter grading.

298. Graduate Student Statistical Packages Seminar. (1 to 2) Seminar, two hours. Introduction to vari-ous statistical packages. How to handle data in differ-ent packages (input, output, data management, treat-ment of missing data), general syntax of different pro-gramming languages, and good practice for writing own statistical functions. S/U grading.

293. Graduate Student Research Seminar. (2) Sem-inar, two hours. Designed for graduate statistics stu-dents. Participating seminar in which various aspects of performing research are discussed by variety of fac-ulty members. Exposure to current research topics in statistics and discussions of special topics, select-able thesis or dissertation topics. May not be applied toward degree course requirements. S/U grading.

294. Scientific Writing. (2) (Formerly numbered C294.) Seminar, two hours. Development of oral and written presentations of statistical data. Objectives and techniques of scientific writing and practice with different forms of professional writing. Participation in oral presentations of student work. 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. Interac-tion with nonprofit organizations can be either on loca-tion or over the Internet. May be used for M.S. thesis; research paper/project required. S/U or letter grading.


375. Teaching Apprentice Practicum. (1 to 4) Semi-nar to be arranged. Practicum on placement or part-time 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.

485. 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, ba-sic statistical analysis in R, and advanced topics in R. S/U or letter grading.

495A. Teaching College Statistics. (2) Seminar, two hours; intensive training at beginning of Fall Quarter. Required of all potential departmental teaching assis-tants and new Ph.D. students. Practical and theoretical issues in teaching of statistics. S/U grading.

495B. 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 use of technology to teach statistics, including use of statistical software as education tool. S/U grading.

495C. Evaluation of Teaching Assistants. (2) Semi-nar, two hours. Overview of new trends and directions in teaching of statistics and grading of teaching assis-tants twice by instructor to give them chance to ob-
serve and analyze their own strengths and weaknesses and think about how they can improve their teaching. S/U grading.

596. 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.


STUDY OF RELIGION
See Religion, Study of

SURGERY
David Geffen School of Medicine
UCLA
72-131 Center for the Health Sciences
Box 951749
Los Angeles, CA 90095-1749
(310) 206-2567
fax: (310) 267-0369
http://www.surgery.medsch.ucla.edu

Chairs
Ronald W. Busuttil, M.D., Ph.D. (Dumont-UCLA Professor of Transplantation Surgery and William P. Longmire, Jr., Professor of Surgery), Executive Chair
Richard J. Shemin, M.D. (Robert and Kelly Day Professor of Cardiothoracic Surgery), Vice Chair, Clinical Affairs
Jonathan R. Hiatt, M.D. (Robert and Kelly Day Professor of General Surgery), Vice Chair, Surgical Education
Peter F. Lawrence, M.D. (Wiley F. Barker Endowed Professor of Vascular Surgery and Lillian and Alvin L. Bergman Professor of Vascular Surgery), Vice Chair, Clinical Practice and Planning
Jerzy W. Kupiec-Weglinski, M.D., Ph.D. (Juan S. and Ralph N. Goldwyn Professor of Immunobiology and Transplantation), Vice Chair, Basic Research
Clifford Y. Ko, M.D., M.S.H.S. (Robert and Kelly Day Professor of Surgical Outcomes), Vice Chair, Clinical Research
Matthias G. Steltzer, M.D., Vice Chair, VA Greater Los Angeles Healthcare System
Bruce E. Stabile, M.D., Vice Chair, Harbor-UCLA
Jesse E. Thompson, Jr., M.D., Vice Chair, Olive View-UCLA
Bruce L. Gewertz, M.D., Chief of Surgery, Cedars-Sinai
Nand S. Datta, M.D., Chief of Surgery, Drew University

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, 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 further details on the Department of Surgery and a listing of the courses offered, see http://www.surgery.medsch.ucla.edu.

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
UCLA
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Box 951622
Los Angeles, CA 90095-1622
(310) 825-7008
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e-mail: info@tft.ucla.edu
http://www.tft.ucla.edu/programs/tth/

Michael J. Hackett, Ph.D., Chair

Professors
Sue-Ellen Case, Ph.D.
Gilbert Cates, M.A.
Susan L. Foster, Ph.D.
Gary A. Gardner, Ph.D.
Harley L. Glogomah, B.F.A.
Michael J. Hackett, Ph.D.
Pamela M. Harker, Ph.D.
Neil P. Jampolis, B.F.A.
Deborah Nadowski Landis, Ph.D. (David C. Copley Professor for Study of Costume Design)
Deborah Nadowski Landis, Ph.D.

Michael S. Comline, Ph.D.
Richard S. Rose, M.F.A.
Mel Shapiro, M.F.A.
José Luis Valenzuela, B.A.
Eddie Villarreal, M.F.A.

Professors Emeriti
Alan M. Armstrong, M.F.A.
John R. Caulee, M.A.
Donald B. Crapps, M.A.
Henry Goodman, Ph.D.
Robert R. Hethmon, Ph.D.
John H. Jones, M.A.
Anna Krajeska-Wieczorek, Ph.D.
Joanne T. McMaster, M.F.A.
Sylvia E. Moss, B.A.
Carol J. Sorgenfrei, Ph.D.
William D. Ward, Ph.D.
William T. Wheatley, Ph.D.
Margaret L. Willbur, M.F.A.

Associate Professor
Joseph M. Olivieri, M.F.A.

Assistant Professors
Myung Hee A. Cho, M.F.A.
Shelley I. Salamensky, Ph.D.

Lecturers
Jonathan A. Burke
Paul E. Girard
Daniel A. Ionazzi, Jr., M.B.A.
Thomas J. Orth

Adjunct Professors
Lynn M. Daily, M.A.
F. Nicholas Gunn

Adjunct Associate Professor
Jean-Louis Rodrigue

Adjunct Assistant Professors
Raqeeb M. Barreto
Dan T. Belzer, M.F.A.
Adelle Cabot, M.F.A.
Scott A. Conte, M.F.A.
Linda Kerns
Jeremy L. Mann
Ed J. Monaghan, M.F.A.
Judith E. Moreland, M.F.A.
Amen Santo
April Shawhan
Bruce Vaughn
Paul M. Wagig

Visiting Associate Professors
Ellen Gror
Salome Jen
Nancy L. Keystone
Amy Lieberman

Visiting Assistant Professors
Michael Donovan
Mary Jo DuPree
Jacey Erwin
Marilyn E. Fox
Peggy Hickey
Brian E. Kite
Jessica Kubraneky
Benedict Schoyen
Peter J. Shushitari, M.F.A.
Jonathan Wang
Julie Weiss

Scope and Objectives
UCLA’s theater program 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, directing, history and criticism, musical theater, and playwriting, all within the rigorous liberal arts framework of the B.A. degree. The department also offers a Theater minor.

At the graduate level, the M.A. in Theater offers a flexible curriculum of graduate courses that
provides a focus in theater scholarship or theater practice. For exceptional students who wish to pursue graduate education, the M.A. offers a foundation in theater history, criticism, or performance studies, or an area of theater practice such as dramatic writing, directing, design, or theater education outreach. Students in the M.F.A. program develop as artists and are given preprofessional training in the skills of theater, while Ph.D. 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 http://www.tft.ucla.edu/programs/ht.

**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 B.A.**

**Capstone Major**

The Theater B.A. provides 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, playwriting, theater history, criticism, dramatic literature, and performance.

**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 at http://www.tft.ucla.edu/admissions/. There is a $50 fee for all auditions/interviews. Applicants may submit materials for consideration in one or more of the following areas: acting, design and production, directing, history and criticism, musical theater, and playwriting.

**Preparation for the Major**

**Required:** Theater 11, 12, 13, 14A, 14B, 14C, 50 (must be taken for 4 units total).

**The Major**

**Required:** A total of 61 upper division units, including Theater 101A, 101B, 101C, 150 (must be taken for 4 units total), and 38 upper division elective units selected from courses 101A through 199 within the elective sequences listed below.

Through some of these required courses, students are responsible for completing specific production assignments related to production activity of the theater curriculum.

The acting electives include fundamental and advanced courses in all aspects of performance training that prepare students for careers in performance. There is some performance in projects, but emphasis is on class and studio work. Upper division advanced courses explore verse, scene study, comedy, cabaret, movement, and combat. One capstone senior project (Theater 180) is required.

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. One capstone senior project (Theater 180) is required.

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. One capstone directing course (Theater 163C) is required.

The history and criticism of theater and drama electives include the study of fundamental cultural, social, ethical, and political issues in the context of artistic expression enriched by historical perspective. The curriculum promotes an awareness of the theater as a global phenomenon embodying the contributions of diverse cultures and explores the verbal and visual elements of its language as revealed through the dynamics of theater production. One capstone senior project (Theater 180) is required.

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. One capstone senior project (Theater 180) is required.

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. One capstone intermediate playwriting course (Theater 131C) is required.

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.

**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 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.

To enter the minor students must be in good academic standing (minimum 2.0 grade-point average), have completed at least one theater 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.

**Required Upper Division Courses (22 to 27 units):** Theater 150, one course from 102A through 102E, M103A through M103G, 105, 106, 107, 108, M109, 110, 111A, 111B, 111C, or 113, and four courses from 118A, 118D, 121, 123, 130A, 138, 139, C146A, C146B, C146C, 149, 195.

A minimum of 20 units applied toward the minor requirements must be in addition to units applied toward major or minor requirements in another department or program, 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, 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, http://www.gndnet.ucla.edu/gasaa/library/programintro.htm. In many cases, more detailed guidelines may be outlined in an-
nouncements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees

The Department of Theater offers Master of Arts (M.A.) and Master of Fine Arts (M.F.A.) degrees in Theater and Candidate in Philosophy (C.Phil) and Doctor of Philosophy (Ph.D.) degrees in Theater and Performance Studies.

Theater

Lower Division Courses

1A-1B-1C. Introduction to Dance for Musical Theater. (1-1-1) Studio, four hours. Designed 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, Letter grading. 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 cliches to deeper insights. Letter grading.

10. Introduction to Theater. (5) Lecture, three hours; discussion, one hour. Exploration of theater in production, with emphasis on collaborative role of theater artists and active role of audience. Understanding of and access to live theatrical event and enhanced appreciation of value of theater to society; development of critical skills through consideration of representative examples of theatrical production from Europe, America, Asia, and Africa. Letter grading.

11. Approaches to Interpretation of Theater and Performance. (5) Lecture, four hours. Introduction to basic method and concerns in interpretation of 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. Development of techniques of play reading and habits of scholarship useful to further study in each of theater's subdisciplines, including acting, directing, design, playwriting, and critical study. Letter grading.

14A-14B-14C. Introduction to Design. (5-5-5) Lecture, three hours; studio, six hours. Exploration of visual interpretation of drama. Study of styles and techniques of design, collaborative role of designer, principles of design for scenery, lighting, costumes, and sound. Both technical and aesthetic groundwork for further study in design. Letter grading.

15. Introduction to Directing. (4) Lecture, two hours; studio, four hours. Requisite: course 11. 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.

20. Acting Fundamentals. (4) Studio, four hours. Introduction to interpretation of drama through art of actor. Development of vocal awareness, listening, and discipline in presentation of dramatic material to audience. P/NP or 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 in Alexander techniques as method of developing balance, poise, and coordination of body and mind. Exploration of principles, techniques, and movement potential of actors and relevant use of visual and animal studies to character development and to expansion of movement potential. P/NP or letter grading.

27. From Vaudeville to Standup Comedy. (2) Studio, three hours. Exploration of 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 comic forms, to discover how comedy draws from so many art forms, including music/songs, dance, storytelling, clowning, magic, design, and tumbling/stunts, and to build overall confidence in comic performance skills. P/NP or letter grading.

28A-28B-28C. Acting, Voice, and Movement Workshops I. (2-2-2) Studio, three to 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. (1 to 4) Studio, three hours. Exploration and development of creative writing skills for one or more of various forms of entertainment media. May be taken for maximum of 8 units. Letter grading.


35A-35B-35C. Singing for Musical Theater I. (1-1-1) Studio, four to five hours. Exploration of musical literacy and development of singing techniques for musical theater. Basic voice training to explore how voice works, learn to maintain appropriate and consistent voice, and learn to preserve voice health. How to build stamina and range. 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 production crew. May be repeated for maximum of 8 units. Letter grading.

57. Production Practice in Theater, Film, Video, and Digital Media. (3) 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. Exploration of traditional performance traditions in terms of how they were produced, including training techniques, archives, practices, and forms of history. Examples may include classical Grecian tragedy, Noh and Kyogen, Ta'zi and Chuanji, Quem Queris/English medieval festival plays, Saniskrit drama, Yoruba/Egungun, Yaqiu deer dance, depending on faculty and resources available. Letter grading.

101B. Reconstructing Theatrical Past. (5) Lecture, three hours; discussion, one hour. Reconstructing the theater is understood in several ways: reconstruction of performance spaces such as New Globe and of specific productions and traditions such that seek to reintegrate classical traditions. Letter grading.

101C. Reconstructing Theatre. (5) Lecture, three hours; discussion, one hour. Exploration of deconstructive practices such as fragmentation, 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. Letter grading.

102B. Theater of Southeast Asia. (5) Lecture, three hours. Exploration of representative theatrical genre from various geographical areas in Southeast Asia to illustrate importance and contribution that theater plays in society. Letter grading.

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; discussion, one hour. Survey of theater 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. (5) (Same as Afro-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 minstrel stage to rise of American musical. Letter grading.

103B. African American Theater History: Minstrel Stage to Rise of American Musical. (4) (Same as Afro-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 works 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 Chicano and Chicanx theatrical 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 Afro-American Studies M103E.) Lecture, three hours. Designed for juniors/seniors. Exploration of extant materials on history and lit-
erature of theater as developed and performed by Afri-
can American artists in America from Depression to
depression and rapidly. 103F. Native American Theater. (5) Lecture, three
hours. Study of American Indian theater as evolving art.
P/NP or letter grading.

M103G. Contemporary Chicano Theater: Chicano Theatre since 1980. (5) (Same as Chicana and Chica-
of Los Angeles. 104B. Civil War to WWI; 104C. WWI to Present.

105. Main Currents in Theater. (5) Lecture, three hours. Critical examination of leading theories of the-
ater from 1887 to present. Study and discussion of
management. Examples primarily from theaters within
their audience, and their goals. Concentration on the-
performance. Study of how experimental theaters orig-
ination. Letter grading.

108. Undergraduate Seminar: History and Criti-
igm. May be repeated once for credit. P/NP or letter
grading.

113. Special Topics in Critical Studies. (5) Lecture, three hours. Study of history of influence
relations of arts to tr aditional disciplines of learn-

119A. Theater for Child Audience: Theory and Crit-
ism. (4) Lecture, six hours. Requisite: course 131A. Preparation
ation of play forms and writing of one-act and full-

123. Intermediate Acting for Stage. (4) Lecture/stu-
dio, four hours. Requisite: course 20. Study and prac-
tice of art of acting through presentation of moderately
and application of those techniques to acting prob-
lems. P/NP or letter grading.

124A-124B-124C. Voice and Speech II. (1-1-1) Stu-
dio, three to four hours. Development of voice and speech

125A-125B-125C. Movement and Combat II. (1-1-1) Studio, three to four hours. Physical training for ac-
tors, concentrating on warming up body, relaxation,
control, stunts, gymnastics, martial arts, and use of
weapons. Letter grading.

125D-125E-125F. Movement and Combat III. (1-1-1) Studio, three to four hours. Physical awareness for ac-
tors, concentrating on warming up body, relaxation,
control, stunts, gymnastics, martial arts, and use of
weapons. Letter grading.

126A-126B-126C. Acting Ill. (4-4-4) Studio, six hours. Study of characterization, including introduction to
Shakespeare. Approach to verse, scansion, use of em-
boles in classic texts. Personification within height-
ened realistic reality. Letter grading.

Comedy workshop, stand-up comedy, performance art
pieces. Audition and cold reading workshop. Solving
individual 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, scene study, and develop-
ment of voice and movement skills. Each course may be repeated for maximum of 12 units. Letter grad-
ing.

129A. 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 writing, direc-
tion, production, and performance. Overview of individ-
ual and collective contributions to the image; examination of
theatrical and interrelationships among these arts. In-
dividual units include participation of leading members
of theater, film, and television professions. May be repeated twice for credit. Concurrently scheduled with
course CM229. P/NP or letter grading.

130A. Fundamentals of Playwriting I. (5) Lecture, three hours; discussion, one hour. Study and analysis of
dramatic structure, characterization, and narrative
leading to guided completion of student-
written one-act play. Letter 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
writing techniques in playwriting, scene study, and develop-
ment of play and performance. May be repeated once for credit. P/NP or letter grading.

131A-131B-131C. Intermediate Playwriting. (5-5-5) Lecture, three hours. Letter grading. 131A. Play Strate-
gies and Styles, Requisite: course 30 or 130A. Explo-
rating the role of play forms and writing of one-act play.
131B. One-Act Play. Requisite: course 131A. Preparation of the text and writing of one-act play and/or outline of
full-length play. May be repeated twice for credit with con-
sent of instructor. 131C. Full-Length Play. Requisites:
courses 131A, 131B. Preparation and writing of full-length play. May be repeated twice for credit with consent of instructor.


C133A-C133B-C133C. Script Development Workshops. (4 to 8 each) Lecture, 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 maximum of 8 units. Concurrently scheduled with courses C433A-C433B-C433C. Letter grading.


136. Advanced Acting for Stage. (4) Studio, four hours. Requisite: course 123. Study and practice of art of acting through progression to more advanced acting problems. May be repeated twice for credit. Consensual enrollment with same instructor not permitted. Total units for courses 136, 137A, 137B, and 137C may not exceed 12 units. Letter grading.

137A-137B-137C. Continuum Study in Acting for Stage. (4) Lecture, three 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, dialogue, ideas, and various other elements essential to effective theatrical interpretation and realization. Letter grading.

C140A. Introduction to Programming for Entertainment Design. (4) Studio, three hours. Study and practice in object-based programming using MAX/MSP programming language. May be repeated once for credit. Concurrently scheduled with course C440A. Letter grading.

C140B. 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.

C140C. Advanced Projects in Programming for Entertainment Design. 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.

C144A-C144B-C144C. Advanced Sound Design. (4-4-4) Lecture, four hours; laboratory, four hours. Concurrently scheduled with courses C444A-C444B-C444C. Letter grading.

C144A. (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 sound, effects, and music tracks for theater sound design. May be repeated once for credit. Letter grading.

C144B. (4) Lecture, four hours; laboratory, four hours. Advanced study and practice in preparation and recreation of original production sound design 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.

C144C. (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, 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. Requisite: course 137A. Study of costume design for theatrical presentations. Study of use of silhouette, fabrics, color, and decoration as related to theatrical characterizations. May be repeated once for credit. P/NP or letter grading.

C146A-C146B-C146C. Art and Process of Entertainment Design. (4-4-8) Lecture. Conceptualization, design, and prototyping of interactive theatrical events. Each course may be repeated once for credit. Concurrently scheduled with courses C446A-C446B-C446C. Letter grading.

C146A. (4) Lecture, three hours. Exploration of original forms of media-rich entertainment experience through lecture, presentation, and participation. Students form collaborative teams to conceive and propose interactive entertainment events. May be repeated once for credit. Letter grading.

C146B. (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 project proposals. May be repeated once for credit. Letter grading.

C146C. (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 Sceney. (4) Studio, four hours. Introductory course in basic skills necessary for drawing, by hand, 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 for scenery, lighting, costumes, and sound. Both technical and aesthetic groundwork for further study. Investigation of techniques for realization of designs in production. Letter grading.

150. Theater Production and Performance. (1 to 2) Laboratory, three to six hours. Laboratory experience 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.

C151A. Scenic Design. (4) Lecture/studio, four hours. Requisites: courses 14A, 14B, 14C. Imagination as im-petus 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.


C151C. Production Design for Film, Television, and Video. (4) Lecture/studio, four 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.


C153A. Costume Design. (4) Lecture/studio, four hours. Requisites: courses 14A, 14B, 14C. 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 C453A. Letter grading.


C153C. Costume Design for Film and Television. (4) Lecture/studio, four hours. Requisites: courses 14A, 14B, 14C. Study of current professional costume design and wardrobe practices in film and television, including effect of differing media on design choices. May be repeated once for credit. Concurrently scheduled with course C453C. Letter grading.

C154A. Sound Design. (4) Lecture/studio, four hours. Requisites: courses 14A, 14B, 14C. Introduction to sound and studio in acoustic, audio, and video domain. Study and practice of techniques for recording, editing, and creating soundscapes. 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. Top-ics include use of delay, equalization, and microphone placement for theater sound reinforcement. Study of creation of sound effects, control of MIDI data, and design signs 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, re-recording, 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 scenic designs, including one- and two-point perspective, form light, shade, and textures. Letter grading.

C155B. Watercolor Rendering. (2) Studio, four hours. Requisite: course 147A or 147B. Study of watercolor techniques as they relate to interpretation of scenic design signs, including painting of brick, wood, stone, fabrics, and other surfaces. Letter grading.
C155C. Marker Rendering. (2) Studio, four hours. Requisite: course 147A or 147B. Study and practice of marker rendering techniques as means of communication for scenic and costume designers. 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 14C or 147A or 147B. Experience and practice in drawing of human form. Letter grading.

C155F. 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.

C155G. 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.

C155H. 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.


C156G. Introduction to Three-Dimensional Models. (4) Studio, four hours. Study of techniques for rendering theatrical costumes, with emphasis on figure, clothing, and fabrics. Letter grading.

C157A-C157B-C157C. Costume Construction Techniques. (2-2-2) Lecture/studio, four hours. Study of theory and application of drafting, pattern making, fitting, 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.

C157A. Requisites: courses 14A, 14B, 14C. Introduction to pattern making, fitting, cutting, and construction techniques for period garments.


163A. Requisites: courses 14A, 14B, 14C. Intensive development of primary directing skills and process, including text analysis and exploration of craft fundamentals as basis for director/actor communication and effective staging. Students direct scenes from plays under laboratory conditions. Letter grading.

163B. Requisites: courses 14A, 14B, 14C. 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. May be repeated twice. 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 Design 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.

174A. Stage Managing Techniques. (2) Studio, six hours. Requisites: courses 14A, 14B, 14C. Laboratory experience as stage manager, including participation as assistant stage manager in preparation, rehearsal, and performance phases of productions. May be repeated once for credit. Letter grading.

174C. Project in Stage Management. (3) Studio, nine hours. Requisite: course 174A. Laboratory experience in professional duties of stage manager, including participation as stage manager in preparation, rehearsal, and performance phases of productions. Offered in summer only. 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. Career Development for Actors. (2) Lecture, three hours; fieldwork, three hours. Limited to seniors. Study of business practices, 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 C285B. P/NP or letter grading.

C185B. Role of Manager 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, six hours. Offered in conjunction 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. Pr/ NP or letter grading.

195. Community or Corporate Internships in Theater, Film, and Television. (2, 4, or 8) Tutorial, eight, 16, or 24 hours. Limited to juniors/seniors. Internship at various locations appropriate to credit. Prerequisite: consent of organizing body. May be repeated with different experiences. Pr/ NP or letter grading. 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, thesis, or seminar hours. Open 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. Pr/ 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 drama. May be repeated twice for credit. S/U or letter grading.

202B. Seminar: Medieval Theater. (4) Seminar, three hours. Designed for graduate students. Selected studies 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 Theater. (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.

202D. Seminar: Bourgeois and Romantic Theater. (4) Seminar, three hours. Designed for graduate students. Selected studies in theater architecture, theatrical production, and dramatic form in English and Continental theater from 1700 to 1870. May be repeated twice for credit. S/U or letter grading.

202E. Seminar: Modern Consciousness in Theater. (4) Seminar, three hours. Designed for graduate students. Study of prototypes of modern experience as encountered in work of Ibsen and Strindberg. May be repeated twice for credit. S/U or letter grading.

202F. Seminar: Modern Realism. (4) Seminar, three hours. Designed for graduate students. Selected studies of theater's response to science and technology, politics, and revolution. May be repeated twice for credit. S/U or letter grading.

202G. Seminar: Modern Theatricalism. (4) Seminar, three hours. Designed for graduate students. Selected studies in symbolism and avant-garde theater. Exploration of dream experience and private psyche, religious experience, and revitalization of myth and ritual. May be repeated twice for credit. S/U or letter grading.


202P. 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, performance modes, and archetypes. May be repeated twice for credit. S/U or letter grading.

202R. Seminar: East Asian Theater. (4) Seminar, three hours. Designed for graduate students. Selected topics in theater forms of East Asia, including dramatic literature, costume, theater spaces, and critical writings. May be repeated twice for credit. S/U or letter grading.

202S. Seminar: South Asian Theater. (4) Seminar, three hours. Designed for graduate students. Selected topics in Indian, Indonesian, and other South Asian theater, including dramatic literature, costume, theater spaces, and critical writings. May be repeated twice for credit. S/U or letter grading.

202T. Seminar: Southeast Asian Theater. (4) Seminar, three hours. Designed for graduate students. Selected topics in theater forms of Southeast Asia, including dramatic literature, costume, theater spaces, and critical writings. May be repeated twice for credit. S/U or letter grading.

203. Theater Ethics and Issues. (5) Seminar, four hours. Designed for graduate students. Investigation of one selected area of theater and drama study that explores significant ethical considerations of modern world. May be repeated four times for credit. S/U or letter grading.

204. Theater Genres. (5) Seminar, four hours. Designed for graduate students. Examination 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.


206. Themes in World Theater and Drama. (5) Seminar, four hours. Designed for graduate students. Selected topics in world theater history, drama, production, and/or architecture organized on thematic basis. May be repeated four times for credit. S/U or letter grading.

207A-207B. Theater Aesthetics. (4-4) Lecture, three hours. Designed for graduate students. Discussion of essential issues in aesthetics of theater and drama based on philosophy of art and theories of theater. S/U or letter grading. 207A. Classical and Medieval Theories of Art and Theater; 207B. Renaissance Theories of Art and Theater to Present.

208A-208B. Dramaturgy I, II. (4-4) Lecture, three hours; laboratory, one hour. Designed for graduate students. Analysis of theory and practice of dramaturgy. May be repeated once for credit. S/U or letter grading.

208C-208D. Practicum in Dramaturgy. (2 to 12) Lecture, three hours; laboratory, one hour. Designed for graduate students. Investigation of work of one theater artist from history of world theater, with 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. Designed for graduate students. Study of selected topics in world theater, drama, production, and architecture. May be repeated four times for credit. S/U or letter grading.

211A. Approaches to Representation. (5) Lecture, three hours; laboratory, one hour. Overview of strategies of representation from classical aesthetic theories to postmodern deconstructions of them. May be repeated once for credit. Letter grading.

211B. Approaches to History. (5) Lecture, three hours; laboratory, one hour. Study of historical methodologies, theories, and debates in historiography of theater and performance linked to plays and performances appropriate to approach. Letter grading.

216C. Approaches to Identification. (5) Lecture, three hours. Analysis of strategy and dramatic form in world theater, including specific and ethical considerations of modern world. May be repeated twice for credit. S/U or letter grading.

220. Graduate Forum. (1 to 2) Seminar, one to two hours. Limited to graduate theater students. Presentation and discussion of issues frames and affecting contemporary theater. May be repeated four times for credit. S/U grading.

221. Introduction to Performance Studies. (5) Seminar, three hours. Investigation of performance as sustaining social space in traditional theater, music, and dance and as lens to focus thinking about human experience in fields such as philosophy, literature, cultural anthropology, linguistics, education, and law. Emphasis on establishing interdisciplinary dialogue across many fields. Letter grading.

CM229. Contemporary Topics in Theater, Film, and Television. (2) Same as Film and Television CM229. 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 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. S/U or letter grading.

230A-230B-230C. Writing for Contemporary Theater. (4 each) Lecture, one to two hours. Designed for graduate students. Letter grading.

230A. 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. 230B. 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 plays. 230C. 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. Variable content selected from topics 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 playwrights and screenwriters in 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 procedures and style leading to visual presentation of design. May be repeated once for credit. S/U or 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 production. Each course may be taken for maximum of 8 units. Letter grading.

245A. Production Management. (4) Lecture, three hours. Study in production management. Examination of professional duties of production manager, including pre-production, rehearsal, and performance phases of productions. Problems of resource management, unions, stage management, 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 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 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/studio, four 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. History survey and in-depth exploration of selected periods, with study of influences of diverse cultures. 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, conceptual development, and preparation of scenic, lighting, costume, or sound designs. May be repeated once for credit. Letter grading.

250. Directing I. (4) Lecture, four hours; studio, 24 hours. Designed for graduate students. Development of directorial skills of analysis, planning, staging, and criticism through preparation of written preparations and directing of scenes. Letter grading.

251. 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. Production of dramatic work, with discussion and critique of work in progress. May be repeated for maximum of 20 units. Letter grading.

253D. Directing Project for Stage. (5) Discussion, three hours 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 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.

265. 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 ongoing evolution of theater as art form. Examination of contribution of significant directors and movements; relation between theater and other forms of representation. Letter grading.

266. Theatrical Conceptualization. (4) Lecture, four hours. Designed for graduate students. Study 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 production. Letter grading.

272. Production Practice in Theater, Film, Video, and Digital Media. (1 to 8) Studio, three to eight hours. 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.

272. Role of Producer in Professional Theater. (2) Lecture, three hours. Designed for graduate students. Study of structure governing economic and artistic decision-making processes in professional theater of America. Concurrently scheduled with course C185A. S/U or letter grading.

272B. Role of Management 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.

272A-272B. 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.

275. Teaching Acting. (4 to 6) Seminar, (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 instructor responsible for curriculum and instruction at UCLA. May be repeated for credit. S/U grading.

240A. Directing I. (4 to 8) Studio, six to 18 hours. Development of internal technique, beginning with autodrama 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 preparation, with 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 through comedy and of skills, improvisation, physical humor, delivery of lines, rhythm, timing, and public cabaret. Fusion of internal use of action and objective with external. Letter grading.

421A-421B-421C. Advanced Acting II. (4 or 8 each) Studio/laboratory, six to 18 hours. Letter grading.

421A. Extending 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.


424A-424B-424C. Advanced Voice and Speech I. (2 or 4 each) Studio/laboratory, three to six hours. Development of voice and speech techniques for stage, including those of relaxation, breathing, resonance, and development of voice. Letter grading uses International Phonetic Alphabet to train students in standard American speech. Text work in poetry and prose. 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. Application of ear training and International Phonetic Alphabet to creation of dialect and accents, as well as systematic approach to creating dialect charts. Letter grading.

425A-F. 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 actor with range, expression, 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. Advance-ment of actor's concepts of movement and their maximum potential. Experience in techniques and discovery of origins of variety of acrobatic and dance disciplines, including ballet, ballroom, period dance, and circus techniques. Letter grading.

425G-425H-425I. Advanced Movement III. (2 or 4 each) Studio, three to six hours. Advanced physical training for actors in one or more movement, dance, or combat discipline: capoeira, martial arts, ballet, ballroom, period dance, 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 balanced 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 movement potential. Letter grading.


430A-430B-430C. Advanced Studies in Playwriting. (4 to 8 each) Lecture, three hours. Limited to M.F.A. 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 M.F.A. playwriting program students. Analysis and practice of varied aspects of playwright's art. Variable content selected from topics such as comedy writing, docudrama, writing for alternative audiences, adaptation from screen, children's theater, or improvisational techniques. May be repeated twice for credit. S/U or letter grading.


433A-433B-433C. 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 and artistic growth of process. Each course may be taken for maximum of 8 units. Concurrently scheduled with courses C133A-C133B-C133C. Letter grading.

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C440B. 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 C140B. Letter grading.

C440C. 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 C140C. Letter grading.

C441A-C441B-C441C. Lighting Design. (4-4-4) Lecture/studio, four hours. Letter grading.

C441A. (4) Lecture/studio, four hours. Study and practice in lighting actors, 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 relationship of lighting designer to actor. May be repeated once for credit. Letter grading.

C441B. (4) Lecture/studio, four hours. Study of use of light and color to define space, effect of light on scenery and costumes, lighting for arena/thrust theaters, multiscreen productions, lighting patterns, and moving scenery. May be repeated once for credit. Letter grading.

C441C. (4) Lecture/studio, four hours. Investigation of lighting design in musicals, 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.

C441D. 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.

C442A-C442B-C442C. Costume Design. (4-4-4) Lecture/studio, four hours. Advanced study and practice in costume design for theater. Imagination as impetus for design, text analysis, metaphor, and conceptualization. Investigation of design research process, period study, and character analysis leading to visual presentation of design. Study of costume design for theatrical productions, ballet, opera, and musical theater. Each course may be repeated once for credit. Letter grading.

C443. Problems in Design. (2 or 4) Lecture/laboratory, four hours (additional hours as required). Study and practice in design techniques for theater. May be repeated for maximum of 12 units. 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 sound in live and recorded settings. 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 original compositions, 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.

C444C. (4) Lecture, four hours; laboratory, four hours. Study and practice in processing and mixing of live and recorded sound. Topics include microphone setup, microphone recording, preparation of sound tracks and sound reinforcement in theater. Study of creation of sound effects, control of MIDI data, and design techniques for music theater. May be repeated once for credit. Letter grading.

C445A-C445B. Production 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 television media, including effect of differing media on design choices, role of production designers and art directors, and design for single- and multiple-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. Each course may be repeated once for credit. 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. May be repeated once for credit. Letter grading.

C446B. (4) Lecture, three hours. Prototype development—two to five prototypes are completely defined and developed. Students form collaborative teams for further conceptual development of their project proposals. May be repeated once for credit. Letter grading.

C446C. (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 mock-ups. May be repeated once for credit. Letter grading.

C448A-C448B. Costume Design for Film, Television, and Entertainment Media. (4-4) Lecture/studio, four hours. Study and practice in design of costumes for live and virtual characters in film, television, and entertainment media, including effect of differing media on design choices. Each course may be repeated once for credit. Letter grading.

C449. Design Thesis Project. (4) Lecture/studio, four hours. Takes of graduate students who have served as comprehensive examination for M.F.A. degree in entertainment design. Review and evaluation of projects by design faculty members from all areas of curriculum. Letter grading.

C451A. Scenic 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 C151A. Letter grading.

C451B. Scenic Design for Theater. (4) Lecture/studio, four hours. Study of scenic design for proscenium, thrust, and arena configurations, multiset productions, and music theater. May be repeated once for credit. Concurrently scheduled with course C151B. Letter grading.

C451C. Production Design for Film, Television, and Video. (4) Lecture/studio, four 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 C151C. Letter grading.

C452A. Lighting Design. (4) Lecture/studio, four hours. Study of lighting with emphasis on imagination, text analysis, metaphor, and conceptualization. Investigation of composition and control of light and color in relation to actor. May be repeated once for credit. Concurrently scheduled with course C152A. Letter grading.

C452B. Lighting Design for Theater. (4) Lecture/studio, four hours. Study of lighting design for proscenium, thrust, and arena configurations, music theater, and concert lighting. May be repeated once for credit. Concurrently scheduled with course C152B. Letter grading.


C453A. Costume Design. (4) Lecture/studio, four hours. Imaginaton 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, multiset productions, and music theater. May be repeated once for credit. Concurrently scheduled with course C153B. Letter grading.

C453C. Costume Design for Film and Television. (4) Lecture/studio, four hours. Study of current professional costume design and wardrobe practices in film and television, including effect of differing media on design choices. May be repeated once for credit. Concurrently scheduled with course C153C. Letter grading.

C454A. Sound Design. (4) Lecture/studio, four hours. Introduction to sound and audio in acoustic, audio, and digital domains. Study and practice of techniques for recording, editing, and creating soundscapes. 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/studio, four hours. Study of current professional sound recording, re-recording, mixing, and synchronization practices for film and television. Concurrently scheduled with course C154C. Graduate students expected to produce designs demonstrating higher level of proficiency and skill. 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 use of two-point perspective, form, light, shade, and textures. Graduate students expected to produce drawings demonstrating higher level of proficiency and skill. Letter grading.

C455B. Watercolor Rendering. (2) Studio, four hours. Requisite: course 147A or 147B. Study of watercolor techniques as they relate to interpretation of scenic designs, including painting of brick, wood, stone, fabrics, and other surfaces. Graduate students expected to produce drawings demonstrating higher level of proficiency and skill. Letter grading.

C455C. Marker Rendering. (2) Studio, four hours. Requisite: course 147A or 147B. Study and practice of marker rendering techniques as means of communicating for scenic and costume designers. 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 space, design, and elevations. May be repeated one time for credit. Letter grading.

C455H. 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 one time for credit. Letter grading.


C457A-C457B-C457C. Costume Construction Techniques. (2-2-2) Studio, four hours. Study of theory and application of drafting, pattern making, fitting, and construction techniques for period costumes and undergarments to achieve authentic-appearing costumes using contemporary methods. Each course may be repeated one time for credit. Concurrently scheduled with courses C157A-C157B-C157C. S/U or letter grading.


C459A-C459B. Directing for Theater, Film, and Televisi. (4-4) Lecture, three hours. Limited to graduate theater students. Analysis and exploration, with specific scenes, of differences and many similarities in directoral approach to same literary material in three media. S/U or letter grading.


C462. Advanced Directing. (8 or 12) Studio, 12 or 30 hours. Designed for graduate students. Advanced problems in directing for theater, film, and television. May be repeated for maximum of 24 units. Letter grading.

C463. Production Project in Direction for Stage (8 or 12 units). Studio, 24 hours. Designed for graduate students. Creative participation as director in conceptualization and preparation of dramatic work. Letter grading.

C472. 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.

C473. Production Practice in Theater, Film, Video, and Digital Media. (1 to 8) Studio, 12 or 30 hours. Designed for graduate students. Creative participation in conceptualization and preparation of dramatic work. Letter grading.

C474. Advanced Projects in Design and Production. (4) Lecture/studio, four hours. Study and practice in preparation and execution of designs for theater, film, video, and related entertainment forms. As contributing artistic member of design team, creative responsibilities include designer, technical supervisor, or production manager. May be repeated for maximum of 16 units. Letter grading.

C496A-C496B-C496C. Practicum and Practice in Teach. (2-2-2) Seminar, to be arranged; discussion, two hours. Limited to Ph.D. students. Study and practice of teaching theater at university level. Orientation and preparation of graduate (Ph.D.) students who have responsibility to assist in teaching undergraduate courses in department. Discussion of problems common to teaching experience. Letter grading.

C498. 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 M.F.A. 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.

C501. 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.

C596A. 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.

C596B. 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.

C596C. 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.

C596D. 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.

C596E. Directed Individual Studies: Acting. (2 to 12) Tutorial, to be arranged. Designed for graduate students. May be repeated with consent of instructor. S/U or letter grading.

C596F. Directed Individual Studies: Production. (2 to 12) Tutorial, to be arranged. Designed for graduate students. May be repeated with consent of instructor. S/U or letter grading.


ASSOCIATE PROFESSORS

Eric R. Avila, Ph.D.
Evelyn A. Blumenberg, Ph.D.
Leobardo F. Estrada, Ph.D.
Vinit Mukhija, Ph.D.
Assistant Professor
Rui Wang, Ph.D.

Lecturers
Stephen K. Commins, Ph.D.
Carol E. Goldstein, B.A.
Gilda Haas, M.A.
Goetz Wolff, M.Phi.

Scope and Objectives
The professional urban planner works on the creation and management of the urban environment, including its physical, economic, and social elements. Housing, transportation, air and water quality, the preservation of historic communities, and the development of community-level economic and employment programs are some of the tasks undertaken by recent graduates of the UCLA Department of Urban Planning. Graduates have taken positions in local, state, and national governments, and increasingly with nonprofit and private companies whose products and services affect the urban environment. While most UCLA graduates find positions in the U.S., the program offers the opportunity to specialize in development planning abroad, including rural development, and many graduates have found positions in Latin America, Africa, and Asia.

The program offers an undergraduate minor in Urban and Regional Studies, a two-year Master of Urban and Regional Planning (M.U.R.P.) degree, and a Ph.D. degree. Concurrent degree programs allow students to combine study for a M.U.R.P. in Urban Planning with work toward an M.B.A. in the John E. Anderson Graduate School of Management, a J.D. in the School of Law, an M.Arch. in the Department of Architecture and Urban Design, an M.A. in Latin American Studies, or an M.P.H. in the School of Public Health.

The department takes pride in its collegial atmosphere. It features a lively mix of students from diverse academic backgrounds, drawn from many foreign countries and from every avenue of American life. It includes many members of racial and ethnic minority groups, and more than half the students are women. Student organizations provide an interesting program of extracurricular activities.

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 at (310) 206-8966.

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, CM160, M165, M175, C184 and (b) up to two courses from Anthropology 167, Chicana and Chicano Studies 181, Geography 150, History 145A, 145B, Management 175, Political Science 143B, 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 or individual research project.

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, http://www.gdnet.ucla.edu/gasaa/library/pgmrqintro.htm. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees

Urban Planning
Upper Division Courses
120. 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, transportation, and residential location and segregation. P/ NP or letter grading.
121. Policy and Planning. (4) Lecture, three hours. Examination of current urban planning and policy issues and debates, such as normative theories of good urban form, metropolitan organization and governance, economic development and growth management, city policies, 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 laboratory. Project-oriented methods course on conducting, interpreting assessment in Asian American communities. Geographic information systems to be used to define problems and needs. Letter grading.
125. Special Topics in Urban Policy and Research. (4) Lecture, three hours. Examination of particular planning/policy subfield (e.g., economic development, transportation, environmental planning, housing and community 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 and works in urbanized areas, and world’s population is becoming more urbanized with each passing decade. National, state, and local governments are engaged in managing, planning, policymaking, and governance in urban context. Ultimate efficacy of these public activities can be enhanced by understanding of economic forces acting on urban areas. Basic concepts related to location choice, agglomeration effects, economies of scale, and specialization 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 crisis, and role of urban social movements. Concurrently scheduled with course C233. P/ NP or letter grading.
CM137. Southern California Regional Economy. (4) (Same as Labor and Workplace Studies M180.) Lecture, three hours. 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-day bus tours of key economic regions and guest lectures by regional experts included. Concurrently scheduled with course C237C. Letter grading.
M140. Issues in Latin American Poverty. (4) (Same as Chicana and Chicano Studies M121 and Labor 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 for Minority Communities. (4) Lecture, three hours. Introduction to inner-city policy issues on three separate levels: (1) each student develops comprehensive inner-city urban program using materials from Alternatives Inner-City Future Exercise, (2) each student is expected to identify value assumptions and theories of social justice implicit or explicit in alternative intervention programs, and (3) each student is expected to participate in class discussions that emphasize minority issues that affect implementation. P/ NP or letter grading.
M150. Transportation Geography. (4) (Same as Geography M149.) Lecture, three hours, 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. How 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 re-
semble small cities, they are used as examples to ex-
plain urban policies (such as BruinGO at UCLA) that universities have adopted to improve transportation. Letter grading.

CM160. Environmental Politics and Governance. (4) (Same as Environment M164.) Lecture, three hours. Examination of institutional and historical evolution of the land use policies and practices in which localities plan. Environmental, social, and equity aspects of different patterns of urbanization and likely trends into future. Letter grading.

M162. Land Use and Development. (4) (Same as Environment M162.) Lecture, four hours. Examination of institutional and historical evolution of the land use policies and ways in which localities plan. Environmental, social, and equity aspects of different patterns of urbanization and likely trends into future. Letter grading.

CM165. California Sustainable Development: Economic Perspective. (4) (Same as Environment M135 and Public Policy M149.) Lecture, three hours. Examination of institutional and historical evolution of the land use policies and practices in which localities plan. Environmental, social, and equity aspects of different patterns of urbanization and likely trends into future. Letter grading.

M165. Environmentalism: Past, Present, and Future. (4) (Formerly numbered CM165.) Lecture, three hours; discussion, one hour. Exploration of history and origin of major environmental ideas, movements or countermovements they spawned, and new and changing approaches within environmentalism. Examination of early ideas of environment, how to 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 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.


M170. Human Environment: Introduction to Architecture and Planning. (4) (Same as Architecture and Urban Design M170.) Lecture, three hours; outside study, nine hours. Kinds of problems that arise in creating and maintaining environment for urban activities. Principles and methods of historical, conceptual, and urban planning in helping to cope with such problems. Complexities involved in giving expression to human needs and desires in provision of shelter and movement, construction and destruction, and protection of technology and building forms, and to issues involved in relating human-made to natural environment. Students are expected to comprehend major urban issues both as citizens and as potential technical experts. P/NP or letter grading.

M171. Planning Issues in Latina/Latino Communities. (4) (Same as Chicana and Chicano Studies M122.) Lecture, three hours. Exploration of socioeconomic, demographic, and political forces that shape low-income communities and analyses of planning intervention strategies. Emphasis on community and economic development and environmental equity. Letter grading (CM175, Women and Cities; Formerly as Women’s Studies M175.) Lecture, three hours. Limited to juniors/seniors. Examination of relationship between women and cities: (1) how cities have affected women’s opportunities for economic and social equality, (2) 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. Introduction to history and physical form 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, of which at least one should be related to 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 required placement and must complete minimum of 30 hours of work. Duties and responsibilities to be set by students and sponsoring organizations. Readings to be determined in consultation with instructor. Letter grading.


195. Community Internships in Urban Planning. (4) Tutorial, 12 hours. Limited to junior/senior Urban and Regional Studies minors. Internship in supervised setting in community agency or urban planning setting. Students meet on regular basis with instructor and provide periodic progress reports. May be repeated for credit. Individual contract with supervising faculty member required. P/NP grading.

199. Directed Research in Urban Planning. (2 to 8) Seminar, 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

M201. Theories of Architecture. (4) (Same as Architecture and Urban Design 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 of speculative inquiry in architectural context. Letter grading.

M202A-202B. Land Use. (1 to 8 each) (Same as Law M526.) Lecture, three hours. Course M202A is enforced requisite to 202B. Exploration of 21st-century land-use public controls, private practice, and litigation in California from basic planning, zoning, subdivision controls, and official mapping to regional growth management, sustainability, and environmentally sensitive land protection. In Progress (M202A) and S/U or letter (202B) grading.

M203A-203B. Seminar: Urban Affairs. (3 to 6 each) (Formerly numbered M200C.) (Same as Law M526.) Seminar, three hours; two field trips. Course M203A is enforced requisite to 203B. Consideration of selected aspects of urban affairs, 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 anticipation and rent control legislation. Consideration of role of economic development in expansion of housing supply also considered. In Progress (M203A) and S/U or letter (203B) grading.

M204. Research Design and Methods for Social Policy. (4) (Same as Public Policy M218.) Lecture, three hours. Outside study, one hour. Advanced 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, advanced data collection methods, including ethnography, interview, and survey design. Letter grading.

M205A-205B. M.U.R.P. Comprehensive Examination: Advanced Planning Research Project. (4) (Formerly numbered 205.) Seminar, three hours. Required of all second-year students completing applied planning research project M.U.R.P. comprehensive examination capstone option. S/U grading. 205A. Guides students through identifying topics, selecting clients, developing scope of work and memorandum of understanding with clients, completing research design and project, writing report, and presenting project, research, and collecting data. 205B. Guides students through completion of data collection, analysis, findings, conclusions, and recommendations portions of assignment. Involves research design and execution of summative field examination and poster synthesizing their work.

M206A. Introduction to Geographic Information Systems. (4) (Same as Public Policy M224A.) Lecture, four hours; laboratory, four hours. Required: course M206A or Public Policy M224A. Principles and skills of geographic analysis and modeling; managing, processing, and interpreting spatial data. Especially useful for students interested in environmental, demographic, suitability, and transportation-related research. Scripts Avenue, modeling (Spatial Analyst), network analysis, and transportation modeling (TransCAD). Letter grading.

search design course that guides students in selecting a problem/question to study, reviewing previous research on problem, and framing specific research questions/hypotheses, and selecting methodology and plan for testing hypotheses. Students complete and orally defend their dissertation/thesis proposal. May be repeated for credit.

209. Special Topics in Planning Theory. (4) Lecture, three hours. Topics in planning theory selected by faculty members. May be repeated for credit. S/U or letter grading.

211. Law and Quality of Urban Life. (4) Lecture, three hours. Introduction to law as urban system, distinguished primarily toward those interested in intersection of law and policy: broad array of urban issues examined, as is causation and cure of urban problems. Examination of law as changing process rather than collection of principles, so that students develop facility to interact with law and lawyers in positive and forceful manner. S/U or letter grading.

212. International/Comparative Planning Workshop. (4) Seminar, three hours; field trips, five to ten days. Topics of planning and policy in various international or domestic sites. Topics may include urban design, urban governance, land use, environmental issues, transportation, infrastructure planning, housing development, community development, and urban policy planning. May be repeated for credit. S/U or letter grading.

215. Spatial Statistics. (4) (Same as Geography M272 and Statistics M222.) Lecture, three hours. Designed for graduate students. Survey of modern methods of spatial statistical analysis, including various techniques using real data sets from diverse fields, including neuroimaging, geography, seismology, demography, and environmental sciences. S/U or letter grading.


218. Graphics and Urban Information. (4) Lecture, two hours; studio, one hour. Presentation of basic graphic methods and tools for conceptualization, analysis, and documentation of built environment. Development of conceptual stages through graphic ideation and communication. Letter grading.

219. Special Topics in Built Environment. (4) Lecture, three hours. Topics in built environment selected by faculty members. May be repeated for credit. S/U or letter grading.

220. Quantitative Analysis in Urban Planning I. (4) Lecture, three hours; laboratory, 90 minutes. Preparation: passing score on basic mathematics proficiency examination given first day of class. Introduction to mathematical and statistical concepts and methods with applications in urban planning. Review of basic mathematical concepts fundamental to planning methods; linear and nonlinear functions focusing on growth curves and mathematics of finance; data measurement and display; descriptive statistics and probability. Introduction to use of computer as tool in analysis of planning-related data. Letter grading.

220B. Quantitative Analysis in Urban Planning II. (4) Lecture, three hours; laboratory, 90 minutes. Requirements: course 220A or equivalent as demonstrated by passing score on mathematics proficiency examination given first day of course 220A. Introduction to concepts of statistical inference and modeling, with emphasis on urban planning applications. Topics include sampling, hypothesis testing, variance, correlation, regression, and simple and multiple regression. Use of computer as tool in statistical analysis and modeling. Letter grading.

222A. Introduction to Planning History and Theory. (4) (Formerly numbered 222.) Lecture, three hours. Required of first-year M.A. students, typically in Fall Quarter; required of first-year Ph.D. students who have not completed comparable graduate course in planning history and theory. Exploration of planning thought and practice over time, leading authors and key issues in field of planning, traditional and insurgent histories of planning, and alternative approaches to planning for multipolar and pluralistic publics. Letter grading.

222B-222C. Advanced Planning Theory and History I, II. (4-4) (Formerly numbered 210A-210B.) Lecture, three hours. Prerequisites: 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 234B, 234C, and many other planning courses addressing Third World issues. Letter grading.

224B. Conservation in Inhabited Landscapes. (4) Lecture, three hours. Recommended preparation: courses 234B, 234C. Science and social sciences of environmental and questions of planning in light of transformations inherent in global change; how to address these questions in ways that go beyond green consumerism and bifurcation of human environment. American environmentalism has become a dominant model for many conservation practices. Informed by Muirist model of idea of untrammeled nature, this approach used in environmental policy and as key idea in conservation and fragment biology. At opposite end is environmental planning developed to infrastructuralize and fragment habitats (cities). Many reasons to be skeptical of both models in 21st century. Exploration of ideas pertaining to these questions. Letter grading.

234C. Resource-Based Development. (4) (Same as Geography M222.) Discussion, three hours. Recommended preparation: course 234A. Some major issues associated with development of specific natural resources. Topics include nature of particular resource (or region associated with it), its previous management, involvement of state, corporations, and local groups, and environmental and social impact of its development. Letter grading.

235A-235B. Urbanization in Developing World I, II. (4-4) Lecture, 90 minutes; discussion, 90 minutes. Course 235A is requisite to 235B. Questions of urbanization and planning in first term; rural development in second term. Case studies from Latin America, Africa, and Asia. Lectures, student presentations, and policy debates. Letter grading.

236A. Theories of Regional Economic Development. (4) (Same as Public Policy M240.) 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 of development of economic development, relations between more and less developed regions. Letter grading.

236B. Globalization. (4) Lecture, three hours. Requirements: course 236A. Application of theories of regional economic development, location, and trade learned in course 236A 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.

236C. Advanced Workshop on Regions in World Economy. (4) Lecture, three hours. Requirements: course 236B. Advanced workshop on regional development examining changes in organizations of national and global systems, their geographies, and processes that affect regional performance in globalized environment. Letter grading.

237A. Sectoral Analysis. (4) Lecture, three hours; laboratory, one hour. Introduction to methods and procedures of sectoral investigation as applied to regions, industries, companies, and their labor forces. Current theories and conceptions of industrial structure and industrial change. Investigation of characteristics and trends of industry subsidiaries in Los Angeles resulting in industry profile that can serve as aid to planning and shaping economic development. Letter grading.

237B. Urban and Regional Economic Development Applications. (4) Lecture, three hours. Survey and analysis of economic development strategies in U.S. Benchmark for economic development strategies, seeking to modify or shape existing conditions, focus on how policies attempt to harness dynamics associated with new forms of industrialization, intensified global competition, and interrelationships among capital, labor, and state. Letter grading.

237C. Southern California Regional Economy. (4) Lecture, three hours. 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 economic regions and guest lectures by regional experts included. Concurrently scheduled with course CM137. 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.

M240. Local Government. (2 to 6) (Same as Law M285S.) Lecture, three hours. Analysis of structure and functioning of local, county, and state government in historical and institutional context: organization, finance, intergovernmental relations, role of judiciary, public services, lawmaking, citizen participation through initiatives, referenda, and government tort liability. Letter grading.


M243. Privatization, Regulation, and Public Finance. (4) (Same as Public Policy M293.) Lecture, three hours; outside study, nine hours. Requisite: Public Policy 220. 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 self-serve policies. Exploration of new regulatory role this trend implies for state and local governments. 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 relationship between poverty and human and social capital, demographic change, low-wage labor market, spatial concentration of poor, residential segregation, and social policy. Letter grading.

245. Urban Public Finance. (4) Lecture, three hours. Requisites: courses 207, 220A. Theory and practice of urban public finance, with emphasis on methods used to fund public infrastructure. Topics include fiscal impact analysis of real estate development, effects of taxes on land-use decisions, benefits assessments to finance neighborhood public investment, private and intergovernmental contracting as means of supplying urban public services, tax increment finance for urban redevelopment, and municipal bond market. S/U or letter grading.

M246. Poverty, Poor, and Welfare Reform. (4) (Same as Social Welfare M292.) 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.

247. Race, Gender, Culture, and Cities. (4) Discussion, three hours. Exploration of multicultural context of contemporary U.S. cities, with focus on changing social and spatial relations of ethnic communities and their political implications. Topics relate new diversity and gender with global restructuring, new urban economy, and policies of workplace, housing, schools, and governance. S/U or letter grading.


249. Special Topics in Social Policy and Analysis. (4) Lecture, three hours. Topics in social policy and analysis selected by faculty members. May be repeated for credit. S/U or letter grading.

250. Introduction to Social Policy. (4) Lecture, three hours. Topics: economic changes and their impact on social needs, and ideological debates that affect development of social policy in U.S., compared with Western Europe. S/U or letter grading.

251. Planning for Multiple Publics. (4) Lecture, three hours. Exploration of planning needs of various social and political groups with different lifestyles and life circumstances and research studies to determine appropriate mechanisms for planning for multiple publics. Analysis of community implications in Los Angeles metropolitan area to gain insights into economic efficiency of planning, problems of planning for multiple publics. Generally, taken in first year. S/U or letter grading.

252. Parking, Transportation, and Land Use. (4) Lecture, three hours. Parking is key link between transportation and land use, but that link has been widely misunderstood. Transportation engineers typically assume that free parking simply is there at end of most trips, while urban planners treat parking as transportation issues that engineers must study. No profession is intellectually responsible for parking, and everyone seems to assume that someone else is doing hard work planners analyze, manage, and operate transportation systems. Measuring system performance, intelligent transportation systems, transportation system demand management, parking management, freight transit evaluation and management, paratransit, bicycle and pedestrian planning, transportation for elderly and disabled. Letter grading.

M254. Transportation, Land Use, and Urban Form. (4) (Same as Public Policy M220L.) Lecture, three hours. Historical evolution of urban form and transportation systems, intrametropolitan location theory, recent trends in urban form, spatial mismatch hypothesis, jobs/housing balance, transportation in strong central city and polycentric city, neotraditional town planning debate, rail transit and urban form. Letter grading.

255. Transportation Planning. (4) (Same as Public Policy M244.) Lecture, three hours. Examination of transportation systems. Measuring system performance, intelligent transportation systems, transportation system demand management, parking management, freight transit evaluation and management, paratransit, bicycle and pedestrian planning, transportation for elderly and disabled. Letter grading.

M256. Travel Behavior Analysis. (4) (Same as Public Policy M244.) Lecture, three hours. Principles of household travel surveys; quantitative techniques; econometric models; choice models; trip distribution, mode split traffic assignment, critique of traditional travel forecasting methods and new approaches to travel behavior analysis. Letter grading.

257. Transportation Economics, Finance, and Policy. (4) (Same as Public Policy M222L.) 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; and public and private policies. S/U or letter grading.

258. Transportation and Environmental Issues. (4) (Same as Public Policy M220L.) Lecture, three hours. Overview of environmental impacts, geography, use of land and water, and consideration of resource planning. S/U or letter grading.

259. Transportation and Economic Development. (4) Lecture, three hours. Examination of equity issues related to urban transportation, with focus on complex relationships among urban spatial structure, transportation (travel patterns and transportation investments), and economic outcomes. Role of transportation in improving economic outcomes of minority households and communities. Letter grading.

C260. 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. Concurrently scheduled with course CM160. Letter grading.

261. Land-Use Planning: Processes, Critiques, and Innovations. (4) Lecture, three hours. Understanding of techniques, processes, strategies, and dilemmas of land-use planning. Despite strong criticisms and demonstrated shortcomings, land-use control remains integral part of planning practice. How does land-use control work? What are its problems with traditional land-use control mechanisms? How do innovations in land-use planning address criticisms? What is role of land-use planning in good society? S/U or letter grading.

262. Urban Environmental Problems: Water Resources. (4) Lecture, three hours. Water is life and wealth in California, which has world’s most extensive long-distance, interbasin water transfer system. To date, water resources planning has been devoted almost exclusively to adding facilities for water delivery. But conflicts over additional developments have basi- cally precluded further development, despite growing pressures to increase supplies. Examination of environmental impacts, geography, use of water, and consideration of resource planning. S/U or letter grading.

263. Introduction to Environmental Analysis and Policy. (4) Lecture, three hours. Introduction to basic concepts and methods of environmental analysis covering variety of 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.

M264A-264B. Environmental Law. (1 to 8 each) (Formerly numbered M264.) (Same as Law M290.) Lecture, three hours. Course M264A is enforced requisite to 264B. Examination of field of environmental law through analysis of various environmental public policies: legal consequences of public 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. In Progress (M264A) and S/U or letter grading (264B) grading.

265. Environmentalisms. (4) (Formerly numbered C265.) 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 problems 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, 220B, or Public Policy 204 and 208. Survey of ways economic tools is used to define, analyze, and resolve problems of
environmental management. Overview of analytical questions addressed by environmental economists that bear on solutions and policies. S/U or 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 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.


M272. Real Estate Development and Finance. (4) (Same as Architecture and Urban Design M272.) Lecture, two hours; workshop, two hours; outside study, eight hours. Requisites: courses 220A, 220B. Recommended for first-year students in community development and architecture. An introduction to real estate development process specifically geared to students in planning, architecture, and urban design. Financial decision model, market studies, design, 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.

273. Site Planning. (4) Lecture, 90 minutes; laboratory, 90 minutes. Requisite: course 274. Introduction to principles of site planning for urban areas. S/U or letter grading.

274. Introduction to Physical Planning. (4) Lecture/ workshop, 90 minutes; discussion, 90 minutes. Designed for students with no prior physical planning background and for first-year M.A. students in community development and built environment, design and development, and transportation policy and planning concentrations. Introductory overview of physical planning, land use, site analysis, and surveys; regulatory structures and social/community impacts. Letter grading.

M275. Community Development and Housing Policies: Roles of State, Civil Society, and Nonprofits. (4) (Same as Social Welfare M290L.) Lecture, three hours; outside study, nine hours. Designed for graduate students. Examination of role of U.S. housing policy and role of government agencies and community organizations. Is property 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.

M276A-276B. Urban Housing. (1 to 8 each) (Formerly numbered M276.) (Same as Law M287.) Lecture, three hours. Course M276A is enforced requisite to 276B. Examination of past 40 years of federal and state programs to stem urban decline and improve housing in U.S.; comparison and contrast of legal and policy initiatives in areas of public housing, housing segregation, mortgage subsidies, landlord/tenant laws, urban renewal, and community organizing. Research paper required. In Progress (M276A) and S/U or letter (276B) grading.

277. Historic Preservation: Principles and Practice. (4) Lecture, 90 minutes; discussion, 90 minutes. Overview of preservation field, including history and theory, current legislation, tax incentives, preservation planning, landmark and district surveys and designations, adaptive reuse, citizen involvement, and social issues. S/U or letter grading.

278. Urban Labor Markets and Public Policy. (4) Lecture, three hours. Central issues in urban economic development: how to stimulate them, how to help disadvantaged populations gain 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 help them work 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 people of urban labor markets work with discussions of 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. Examination of power and economic inequality and how to make changes. Letter grading.

279. Seminar: Public Space. (4) Seminar, three hours. Investigation of changes in production, consumption, design, and meaning of 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. Exploration of basic concepts and skills utilized in non-profit development initiatives, especially by community-based organizations. Focus on non-profit provision of subsidized housing to low-income homeowners, first-time homebuyers, broker debt and equity funding from private, government, and philanthropic sources. Use of client project and negotiation exercises. S/U or letter grading.

281. Introduction to Urban History of Built Environment in U.S. (4) Lecture, two hours; discussion, one hour. Open to advanced undergraduates with consent of instructor. Introduction to history of physical forms of urbanization in America; survey of economic, political, social, and aesthetic forces behind creation of built environments. S/U or letter grading.

282. Urban Design: Theories, Paradigms, Applications. (4) Lecture, three hours. Discussion and evaluation of philosophical bases, ideologies, and paradigms of urban design in last century; examination of how these are reflected on built environment of cities. Letter grading.

284. Looking at Los Angeles. (4) Lecture, three hours. Introduction to history and physical form of Los Angeles, with emphasis on understanding social, economic, and political issues in development of Los Angeles. Concurrently scheduled with course C184. Letter grading.

285. Women and Community Development: Great Gender Debates. (4) Lecture, nine hours; discussion, 90 minutes. Focus on gender, race, class and power in community development, and women, with attention to interaction of gender, race, and class/ethnicity. Examples from domestic and international developments. Alternate theories and methods to close gaps between household needs and urban policies. Preparation of written and oral critical reviews of literature and research paper. Letter grading.

286. Management Challenges and Tools for Nonprofit Sector. (4) (Same as Public Policy M226 and Social Welfare M290V.) Lecture, three hours; outside study, nine hours. Designed for graduate students. Fundamental building blocks for successful management of organizations: management skills in strategic thinking/problem solving, project management, team building, and negotiation. Use of case studies to identify common challenges, from finance to crisis management to marketing, that nonprofit managers typically face. Letter grading.

287. Nonprofit Sector, State and Civil Society. (4) (Same as Public Policy M227 and Social Welfare M290S.) 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 movements and nonprofit sector in U.S. Exploration of legal and policy environments and different organizational forms. Comparative perspective between U.S. and other countries. S/U or letter grading.

288. Leadership, Development, and Governance of Nonprofit Organizations. (4) (Same as Public Policy M247 and Social Welfare M281F.) Lecture, three hours; outside study, nine hours. Designed for graduate students. 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. Letter grading.

289. Strategic Planning for Public and Nonprofit Organizations. (4) (Same as Public Policy M247 and Social Welfare M241F.) Lecture, three hours; outside study, nine hours. Designed for graduate students. Technical processes of problem solving regarding substantive social problems. This form of community practice fills niche between professional and knowledge and skill set possessed by an agency or program administrators on one hand and by policy analysts and politicians on other. Letter grading.

291. Introduction to Sustainable Architecture and Community Planning. (4) (Same as Architecture and Urban Design CM247A.) Lecture, three hours. Relationship of built environment to natural environment through whole systems approach, with focus on sustainability of designs and buildings and planning of communities. Issues include energy efficiency, renewable energy, and appropriate use of resources, including materials, water, and land. Letter grading.

292. Elements of Urban Design. (4) (Same as Architecture and Urban Design M292.) Lecture, three hours. Exploration of cultural and political context of architecture and urban design. Concepts of varied physical environments and to set of current spatialized concepts. Consideration of theoretical propositions that are shaping present urban architectural and debate case studies where politics and ideology shape design process. Letter grading.

294. Housing in Developing Countries: Policy Objectives and Options. (4) Lecture, three hours. Examination of relevance of public policies and their intended and unintended effects on housing demand and supply in developing countries. Examination of factors that influence housing problems, and scope of solutions, has changed over time. Critical assessment of some key solutions that have been tried in past, their advantages, shortcomings, and resultant trade-offs, and likely directions for future housing policy. Letter grading.

296. Management Challenges and Tools for Nonprofit Sector. (4) (Same as Public Policy M226 and Social Welfare M290V.) Lecture, three hours; outside study, nine hours. Designed for graduate students. Fundamental building blocks for successful management of organizations: management skills in strategic thinking/problem solving, project management, team building, and negotiation. Use of case studies to identify common challenges, from finance to crisis management to marketing, that nonprofit managers typically face. Letter grading.

298. Special Topics in Emerging Planning Issues. (4) Seminar, three hours. Topics in newly emerging planning issues such as role of cutting edge technology, innovative policies, and experimental programs. May be repeated for credit. S/U grading.

375. Teaching Apprentice Practicum. (1 to 4) (Same as Architecture M231.) Seminar, to be arranged. Preparation: apprentice personnel under supervision of faculty fellow. Teaching apprenticeship under active guidance and supervision of regular faculty member responsible for course planning and instruction at UCLA. May be repeated for credit. S/U grading.

M404. Joint Planning/Architecture Studio. (4) (Same as Architecture and Urban Design M404.) Lecture, one hour; discussion, one hour; studio, four hours. Opportunity to work on joint planning/architectural project for client. Outside speakers; field trips. Examples of past projects include Third Street Housing, Santa Monica; New American House for nontraditional households; Pico-Aliso Housing, Boyle Heights; working with resident leaders at Los Angeles City public housing developments. S/U or letter grading.
M470. Improving Worker Health: Social Movements, Policy Debates, and Public Health. (4) (Same as Community Health Sciences CM470 and Environmental Health Sciences M471.) 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. S/U or letter grading.

496. Field Projects. (4) Tutorial, four hours. May not 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 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. M.A. Research in Planning. (4) Tutorial, three hours. May be repeated once for credit. S/U or letter grading.

597. Preparation for M.A. Comprehensive Examinations or Ph.D. Qualifying Examinations. (4 to 12) Tutorial, four hours. May be repeated for credit by Ph.D. students. S/U grading.

598. Preparation for M.A. Thesis in Urban Planning. (4) Tutorial, four hours. May be repeated but may be applied toward degree only once. S/U grading.


UROLOGY
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http://urology.ucla.edu

Chair
Jean B. deKernion, M.D. (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 one week on the urology service during the third year and may return for an additional four-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 further details on the Department of Urology and a listing of the courses offered, see http://urology.ucla.edu.

Urology
Upper Division Course
199. Directed Research in Urology. (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.

VISUAL AND PERFORMING ARTS EDUCATION
Interdisciplinary Minor
School of the Arts and Architecture
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Angelia S.-Y. Leung, M.A., C.M.A., Chair

Faculty Committee
Judith F. Baca, M.A. (Chicana and Chicano Studies, World Arts and Cultures/Dance)
Tara C. Browner, Ph.D. (Ethnomusicology)
Barbara Drucker, M.F.A., ex officio (Art)
Angelia S.-Y. Leung, M.A., C.M.A. (World Arts and Cultures/Dance)
Willem Henri Lucas, B.A. (Design | Media Arts)
Patricia A. Wideman, M.F.A. (Art)

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 public schools in general and specifically in relationship to the K-12 public school system, (2) introduce students to a potential range of careers in the arts, including teaching artists, arts specialists, museum educators, arts administrators, and arts advocates and to a variety of arts-related programs and cultural agencies, including community arts centers, museums, after-school programs, and nonprofit arts institutions, (3) contribute to improved communication and interaction between the University, extended Los Angeles community, K-12 public school system, and students in the arts, and (4) expand the School of the Arts and Architecture’s 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.

Women’s Studies
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Jennifer A. Sharpe, Ph.D., Chair

Professors
Carole H. Browner, Ph.D., in Residence
Ellen C. DuBois, Ph.D.
Alicia Gaspar De Alba, Ph.D.
Sondra Hale, Ph.D.
Sandra Harding, Ph.D.

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, Design I Media Arts, Ethnomusicology, Music, 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 and Architecture 102 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 statement of interest, a résumé including any previous teaching and/or outreach experience, and at least one letter of recommendation from a faculty member in the home department. Applicants are contacted regarding an interview.

Required Upper Division Courses (28 to 32 units): (1) Arts and Architecture 102, (2) two courses selected from Arts and Architecture 100, Art M186A/M186AL, Dance C145 (with consent of adviser), 166, 167, Ethnomusicology 196, Music 100A, Theater 118A, 118D, World Arts and Cultures 103, 120 (with consent of adviser), C155, a 4-unit 195 course from the Departments of Art, Design I Media Arts, Ethnomusicology, Music, or World Arts and Cultures/Dance, or a 195 sponsored by the Center for Community Learning, (3) two courses selected from Education M108, 118, 120, 121, 122, 123, C125, C126, 127, 128, 129, 130, 131, 132, 133, 138, M186 (courses 120, 121, 127, and 130 are recommended), and (4) a two-course capstone sequence (Arts and Architecture 192, 192SL) that includes a guided teaching experience.

No more than two upper division courses (8 to 10 units) may be applied toward both this minor and a major or minor in another department or program. Each minor course must be taken for a letter grade. Successful completion of the minor is indicated on the transcript and diploma.
The Department of Women's Studies provides 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 Ph.D. students only, no terminal master's) and Ph.D. 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 women's 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 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, Middle East women’s studies, and gender and the law. Over the past several years, it has become a leading center 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, and studies of settler colonialism.

Undergraduate Study

Women's Studies B.A.

The major in Women's 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 Women's 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 the University’s diverse 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 women's 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 women’s 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: Women's Studies 10. Students must also complete departmental lower division requisites, as applicable, for upper division women's studies courses.

Transfer Students

Transfer applicants to the Women's Studies major with 90 or more units must complete the following introductory courses prior to admission to UCLA: one multidisciplinary feminist perspectives in women and society course and departmental lower division requisite courses. Refer to the UCLA Transfer Admission Guide at http://www.admissions.ucla.edu/prospectivetransfer.htm 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 exposure to a range of feminist scholarship across disciplines. To achieve these goals, the major is divided into three categories.

Required: At least 11 upper division courses (minimum of 4 units each) as follows: (1) three core courses — Women’s 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 Women's Studies majors with a 3.6 grade-point average in women's 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.

Women's Studies Minor

The Women's 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 Women's 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):
Women's Studies 10. Students must also complete departmental lower division requisites, as applicable, for upper division women's studies courses.

Required Upper Division Courses (24 units): (1) One core course from Women's Studies 102, 103, or 104, (2) 120 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 women's studies course list. No more than 4 units of courses 195 through 199 may be applied.

Each minor course must be taken for a letter grade, and students must have an overall grade-point average of 2.0 or better. Courses in which students receive grades of C– or lower may not be applied toward the core requirements in 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, http://www.gdnet.ucla.edu/gasaa/library/pgmreqintro.htm. In many cases, more detailed guidelines may be outlined in announcements, other publications, and websites of the schools, departments, and programs.

Graduate Degrees

The Women's Studies Department offers Master of Arts (M.A.) and Doctor of Philosophy (Ph.D.) degrees in Women's Studies.
102. Power. (4) Lecture, three hours. Enforced requisite: course 10. Consideration of how feminist theorists have critiqued traditional theories of power, as well as ways feminist and other social movements have challenged sex- and gender-based social subordination. Focus on contribution of women of color feminism to ways power is conceived and organized. Historicalizing of women of color feminism within context of new social movements of the 1970s. Examination of ways in which relations of power shifted in wake of these social movements, necessitating new perspectives on such terms as struggle, resistance, and agency. Theorizing of key concepts of women of color feminism—intersectionality and difference— as offering these new perspectives. P/NP or letter grading.

103. Knowledge. (4) Lecture, three hours. Enforced requisite: course 10. One central aim of research in field of women's studies has been to disclose ways that knowledge production historically has been gendered, and to suggest alternative methods of inquiry and interpretation. In seeking to supplement or provide alternatives to dominant research methods, some scholars have sought to distinguish distinctively feminist ways of knowing. Introduction to lively ongoing debates within academy concerning knowledge production, with focus on central epistemological and methodological controversies existing in social sciences and humanities. Consideration of stakes and implications of these sometimes abstract debates, with focus on one particular arena of scholarly inquiry—what historians of black women have sought to define and investigate inner lives of historical subjects. P/NP or letter grading.

104. Bodies. (4) Lecture, three hours. Enforced requisite: course 10. Tracing of shifting meanings of terms sex and gender in different historical periods and social locations, as well as how these terms have been produced as essential difference? What is presumed relationship between body and gendered subjectivities? What role does heteronormativity play in constructing and regulating sex identity and gender roles? How has category of woman been critiqued and restructured and regulating sex identity and gender roles? May be repeated for credit with topic or instructor change. P/NP or letter grading.

M104C. Diversity in Aging: Roles of Gender and Ethnicity. (4) (Same as Gerontology M104C and Social Welfare M104C.) Lecture, four hours. Exploration of complexity of variables related to diversity of the aging population and variability in aging process. Examination of gender and ethnic differences and main differences and differences in the field of physical and social aging, in a multidisciplinary perspective utilizing faculty from a variety of fields to address issues of diversity. Letter grading.

105. Topics in Women's and Gender Studies. (4) Lecture/ discussion, three hours. Examination of medical conditions of women in context of issues that impact women's health, healthcare, and healthcare providers. Discussion of basic health concepts and self-care; consideration of a women's health specialty and ways to deliver healthcare to women. Exploration of roles and lifestyle issues in women's healthcare. P/NP or letter grading. M105A. Premodern Queer Literatures and Cultures. (5.) (Same as English M101A and Lesbian, Gay, Bisexual, and Transgender Studies M101A.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. 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.) (Formerly numbered M101B.) (Same as English M101B and Lesbian, Gay, Bisexual, and Transgender 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, 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.) (Formerly numbered M101B.) (Same as English M101B and Lesbian, Gay, Bisexual, and Transgender Studies M101C.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. Examination of cultural production produced by queer after Stonewall rebellion in New York in 1969, widely regarded as origins of beginning of modern lesbian and gay rights movement in U.S. Writings and films by such authors as Eve Sedgwick, Andy Ohejas, 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.) (Formerly numbered M101C.) (Same as English M101D and Lesbian, Gay, Bisexual, and Transgender Studies M101D.) Lecture, four hours; discussion, one hour (when sched- uled). Enforced requisite: English Composition 3 or 3H. Variable 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.

M106. Imagining Women. (4.) (Same as Honors College D16, Social Science C16 in honors, Designated for ju- niors/seniors. Study of four female cultural archetypes—abscording wife/mother, infanticide mother, intellec- tual woman, and warrior woman—as they appear in their classical and modern manifestations in European and American cultures. P/NP or letter grading.

M107A. Women in Jazz. (4) (Formerly numbered M107C.) (Same as English M107A.) Lecture, four hours; discussion, one hour (when sched- uled). Enforced requisite: English Composition 3 or 3H. Focus on women writers that may include historical, re- gional, national, or thematic emphasis, with possible topical variations. May be repeated for credit with topic and genre. May be repeated for credit with topic or instructor change. P/NP or letter grading.

M107B. Studies in Gender and Sexuality. (5) (Not same as course 101.) (Same as English M107B and Lesbian, Gay, Bisexual, and Transgender Studies M107B.) Lecture, four hours; discussion, one hour (when scheduled). Enforced requisite: English Composition 3 or 3H. 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 intersections of identity and representation such as race and ethnicity. May be repeated for credit with topic or instructor change. P/NP or letter grading.

M108. Love and Sex in German Literary Tradition. (4) (Same as German M107.) Lecture, three hours. Taught in English. Study of major literary works that address issues of idealized desire, emotional/sexual boundaries, and development of sexual identity. Letter grading.

108S. Violence against Women. (4) (Formerly numbered M108S.) 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.

110A. Feminist Theories in Social Sciences. (4) Lecture/discussion, three hours. Requisite: course 10. Multidisciplinary explorations of theorists' attempts to describe, explain, and interpret, reconsider, and consider impact of race, ethnicity, class, etc. Emphasis on relation of theories to change in law, work, politics, economics, psychology, education, religion, sexuality, etc. Applications of theories to research questions and methodologies. P/NP or letter grading.

110B. Feminist Theories in the Humanities. (4) Lecture/discussion, three hours. Requisite: course 10. Examination of 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 and liberation. Philosophy of theories to research questions and methodologies. P/NP or letter grading.

M110C. Philosophical Analysis of Issues in Femi- nist Theory. (4) (Same as English M110.) Lecture, three hours. Requisite: Women's Studies majors: course 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 and liberation. Philosophy of theories to research questions and methodologies. P/NP or letter grading.

M111. Women and Film. (6) (Same as Film and Tele- vision M111.) Lecture, each hour, one to three hours. Historical issues and critical approaches to women and cinema that may include authorship, stardom, female genres, and images of women in Hollywood comedies, alternative cinema, and independent cinema from silent era to present. Letter grading.

112. Special Topics in Women and the Arts. (4) Lecture, three hours. Requisite: course 10. Selected 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, representa- tion, and access. May be repeated twice, except for credit toward Women's Studies major. P/NP or letter grading.

M114. Introduction to Lesbian, Gay, Bisexual, and Transgender Studies. (3) (Same as English M114, Gay, Bisex- ual, and Transgender Studies M114.) Lecture, three hours; discussion, one hour. Introduction to histo- ry, politics, culture, and scientific study of lesbians, gay men, bisexuals, and transgenders, with examination of sexuality and gender as categories for investiga- tion; interdisciplinary theories and research on minority sexualities and genders. P/NP or letter grading.

M115. Topics in Study of Sexual and Gender Orienta- tions. (4) (Same as English M115, Gay, Bisexual, and Transgender Studies M115.) Lecture/discussion, three hours. Requisite: course 10 or M114. Studies in arts, humanities, and social sciences concerning gender on as- pects of sexual orientation, gender identity, and lesbi- an, gay, and/or bisexual issues; variable topics may in-
include cultural representations, historical and political change, life and health experiences, and queer or trans gender theories; multicultural and cross-cultural emphases. May be repeated for credit. Letter grading.


M117. Women and Politics. (4) (Same as Political Science M117) Lecture/or four or four hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Introduction to rapidly growing body of empirical and theoretical scholarship on women and politics in both national and international contexts. Topics may include women's movement in U.S. and globally; women's electoral participation; representation of women in Congress and in legislatures worldwide; women as heads of government and state; feminist critiques of political systems as well as national and transnational. Attention to various roles, positions, and concerns of Chicana, and Native American women in order to assess intersections of race, ethnicity, class, and gender. Controversy and mediation; feminist theory, and political practices on race and its relation to feminism as defined by women of color. P/NP or letter grading.

M118. Queering American History. (4) (Same as Lesbian, Gay, Bisexual, and Transgender Studies M118) Lecture, four hours. Enforced requisite: one pri or or upper division women's studies course. History of sexual and gender minorities in U.S. Topics include changing norms, romantic friendships, medical discourse, liberation politics, post-Stonewall culture. Attention to transformative and revolutionary, queer theory, and politics. P/NP or letter grading.

M119. Tristan, Isoldé, and History of Heterosexuality. (4) (Same as German M105) Lecture, three hours. Taught in English. German, French, and English versions of Tristan and Isoldé story from Middle Ages to 20th century. Particular attention to relation between representation of heterosexual love in each text and contemporaneous ideas about human sexuality. P/NP or letter grade.

120. Internship in Women's Studies. (4) Seminar, three hours; internship, eight hours. Preparation: at least two upper division women's studies courses. Requisite: upper-division women's studies course combining seminar with field placement. Practical experience in working on women's issues and connecting these experiences to methodological and theoretical frameworks explored in course 110A or 110B. Letter grading.

M121. Topics in Gender and Disabilities. (4) (Same as Disability Studies M121) Lecture, three and one half hours. Explores intersectionality of disability and gender. Why various aspects of lived experiences of disability are affected by gender, with particular attention to various roles, positions, and concerns of women with disabilities. Approach is intersectional, exploring how interconnections 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), representation (arts, literature, education), public health. May be repeated for credit with topic and instructor change. P/NP or letter grading.

M124. Psychology of Language and Gender. (4) (Same as Communication Studies M124) Lecture, four hours; discussion, topic and method of current topics at intersection of gender and language. Topics include sex differentiation in language across cultural systems; sex bias in lexicon and usage, sex differences in language; cross, synchrony, and nonverbal behavior; development of sex differentiated language in children; women's and men's language in various racial/ethnic/class/ssexual preference groups; and conversational interaction. Letter grading.


M133A. Chicana Lesbian Literature. (4) (Same as Chicana and Chicano Studies M133A) Lecture, three hours. Exploration of intersection of radical First and Third World feminist politics, lesbian sexuality and its relationship to Chicana identity, representation of Chicanas both within Chicanas/Chicana communities and dominant society. Attention to Anglo-European and Third World women. P/NP or letter grading.


130. Women of Color in the U.S. (4) Lecture/discussion, three hours. Enforced requisite: course 10 or Chicana and Chicano Studies M10A. Examination of theories and practices of women who identify as “Chicana feminism.” Analysis of writings of Chicanas who do not identify as feminist but whose practices are feminist. Chicana has both within Chicanas/Chicana community and dominant society. Attention to Anglo-European and Third World women. P/NP or letter grading.

M134. Gender, Science, and Theory. (4) (Same as Environmental Studies 134) Lecture, three hours; discussion, one hour (when scheduled). Requisite: one course from 10 of 103, 104, English 120, or 121. Investigation of key concepts and debates in study of gender, sexuality, gender, 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 society and culture. 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 junior or upper division women's studies students. Introduction to “alternative tradition” of women's writings in Russia and the 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.


M132A. Chicana Feminism. (4) (Same as Chicana and Chicano Studies M132A) Lecture, three hours. Requisite: course 10 or Chicana and Chicano Studies M10A. 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 are feminist. Chicana has both within Chicanas/Chicana community and dominant society. Attention to Anglo-European and Third World women. P/NP or letter grading.

M136. Music and Gender. (5) Lecture, three hours; discussion, one hour (when scheduled). Enforced requisite: one course from English M136, Music and Gender. Study of women and men. Topics include antecedents of career choral work and gender in music, including representation, discrimination and evaluation bias, job satisfaction, and interdependence of work and family roles. P/ NP or letter grading.


M140. Women's Studies in French Literature. (4) (Same as French M140) Lecture, three hours. Exploration of selected aspect of history of women in French literature as author, character, symbol, etc. P/NP or letter grading.


153C. Bilingual Writing Workshop. (4) (Same as Chicana and Chicano Studies M153C) Seminar, four hours. Writing sample required on first day of class; access to course Web page mandatory; need not be bilingual. Enforced requisite: one course from Chicana and Chicano Studies M153A or letter grade. Study of theoretical perspectives on bilingual creative expression, with focus on specific genre (i.e., autobiography, poetry, fiction). Emphasis on memory, identity, gender, and sexuality; and central theme of bilingualism as politics and aesthetics. Peer critique of weekly writing assignments. Letter grading.

M136. Music and Gender. (5) (Same as Music History M136) Lecture, four hours. Enforced requisite: course 10 or Psych 10. Exploration of some significant cultural issues of contemporary American women's art movement. Study of women and men. Topics include antecedents of career choral work and gender in music, including representation, discrimination and evaluation bias, job satisfaction, and interdependence of work and family roles. P/ NP or letter grading.


M140. Women's Studies in French Literature. (4) (Same as French M140) Lecture, three hours. Exploration of selected aspect of history of women in French literature as author, character, symbol, etc. P/NP or letter grading.


texts and political conditions that give rise to women’s resistance, as well as major debates in field of study. L6 P/N or letter grading.

M146. Feminist Geography. (4) (Same as Geography 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.

M147. Psychology of Lesbian Experience. (4) (Same as Lesbian, Gay, Bisexual, and Transgender Studies M147A and Psychology M147A.) Lecture, two hours; discussion, one hour. Required: course 10 or Lesbian, Gay, Bisexual, and Transgender Studies M114 or Psychology 10. Designed for juniors/seniors. Review of research and theory in psychology and women’s studies to examine various aspects of lesbian experience, impact of heterosexism/stigma, gender role socialization, 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.

M147B. History of Women in Colonial British America and Early U.S., 1600 to 1860. (4) (Same as History M147C.) Lecture, three hours; discussion, one hour. Required: course 10 or 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 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 M147.) 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, gender, and globalization effect 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 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 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 history of American women from abolition of slavery and Civil War to rise and consequences of second-wave feminism. P/NP or letter grading.

M148. Women in Higher Education. (4) (Same as Education 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, gender equity, women’s health, and intersection of gender and race. Letter grading.

M149. Media: Gender, Race, Class, and Sexuality. (5) (Same as Communication Studies M149 and Labor and Workplaces M149.) Lecture, four hours; activity, one hour. Limited to junior/senior Communication Studies and Women’s Studies majors and Labor and Workplace Studies minors. Examination of manner in which diverse categories of people are represented by various dominant and codominated and/or colonized groups of people. Ways in which women, gay, lesbian, bisexual, transgendered, racial, and ethnic marginalized peoples, and subordinate subaltern and边缘 groups are presented and often misrepresented in media. Investigation and employment of practical applications of communications and feminist theories for understanding representation of stereotyped and political representation through use of media, guest presentations, lectures, class discussions, and readings. Introduction to theory and practice of cultural studies. Letter grading.


M155. Women’s Voices: Their Critique of Anthropological Narrative. (4) (Same as Anthropology M155.) Lecture, three hours. Preparation: introduction to 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.

M155Q. Gender and Social Movements. (4) (Same as Anthropology M155Q.) Lecture/discussion, three hours. Recommended preparation: prior women’s studies or anthropology courses. Comparative studies of social movements (e.g., nationalist, socialist, liberal reform), beginning with Japanese and China and including Cuba, Algeria, Bolivia, Mexico, Nicaragua, and Iran. Analysis of women’s participation in social movements and the centrality of gender interests across movements. P/NP or letter grading.

M156A. 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 rights, and body. Examination of dramatic challenges 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 Historiography. (4) (Same as Chicana and Chicano Studies M157 and History M151D.) Lecture, three hours. Examination of Chicana historiography, looking closely at how practice of writing of history has placed Chicanas into particular narratives. Using Chicana feminist approaches to study of history, revisiting of specific historical periods and people moments such as Spanish Conquest, Mexican Period, American Conquest, Mexican Revolution, and Chicano Movement to excavate untold stories about women’s participation in and contributions of Chicana and Chicano history. P/NP or letter grading.

M158. Women, Gender, and Sexuality in Italian Culture. (4) (Same as Italian M158.) Lecture, three hours: discussion, one hour. Gender role, gender roles, images of femininity and masculinity, patriarchy, myths of Madonna and Latin lover, condition of women in Italian societiy through history, politics, literature, film, and other media. Italian majors required to read texts in Italian. P/NP or letter grading.

M159. Politics and Evolution. (4) (Same as Communication Studies M159.) Lecture, three hours. Discussion of theories and research on why pornography exists and its effects. Use of topic to illustrate value of theoretical study to social sciences generally. Letter grading.

M162. Sociology of Gender. (4) (Same as Sociology M162.) Lecture, three hours; discussion, one hour. Required: course 10 or Sociology 1. Examination of processes by which gender is socially constructed. Topics include distinction between biological sex and sociological gender, causes and consequences of gender inequality. Particular focus on gender relations in modern industrial societies. P/NP or letter grading.

M163. Gender and Work. (4) (Same as Sociology M163.) Lecture, three hours. Required: course 10 or Sociology 1. Examination of how questions of race and gender influence global labor market, 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 Sociology M164.) Lecture, three hours; discussion, one hour. This course leads to intersectionality politics and life cycle. Topics include social construction of gender and population, reproductive issues, politicization of mothers and motherhood, and marriage, mourning, and new reproductive technologies. Letter grading.

M164A. Women, Violence, Globalization: India, Philippines, Singapore, Vietnam. (4) (Same as Asian American Studies M164.) Lecture, four hours. Study of various forms of violence done on women not only in their own society but in less developed societies of oppression, with focus on Filipino, Vietnamese, Singaporean, and South Asian cultures. Letter grading.

M165. Psychology of Gender. (4) (Same as Psychology M165.) Lecture, three hours. Consideration of psychological literature relevant to understanding contemporary sex differences. Topics include sex-role development and role conflict, physiological and personality differences between men and women, sex differences in intellectual abilities and achievement, and impact of gender on social interaction. P/NP or letter grading.

M166. Women in Socialist and Post-Socialist States. (4) (Same as Sociological Anthropology M166.) Lecture, three hours; discussion, one hour. Exploration of diverse aspects of women’s lives in socialist and post-socialist states. Although transition from socialism occurs differently, gender issues remain central to democratisation and marketization. Discussion of ways in which state policies affect women. Letter grading.

M167. Contested Sexualities. (4) (Same as Lesbian, Gay, Bisexual, and Transgender Studies M167.) Lecture, three hours; discussion, one hour. Sociological perspectives on formation, control, and resistance of lesbian, gay, bisexual, and transgendered people. Variations in the social and cultural meanings of gender, and population, reproductive issues, politicization of mothers and motherhood, and marriage, mourning, and new reproductive technologies. Letter grading.

M168. Feminist Economics in Globalizing World. (4) Lecture, four hours. Preparation: Letters and Science Writing II requirement. Required: course 10. Designed for juniors/seniors. Overview of field of feminist economics, with emphasis on development economics in globalizing world economy. Overview of gender inequalities such as gender division of labor in paid and unpaid work, patterns of employment and unemployment, and wage gaps between men and women in different world regions. Literature feminist critiques of economics and of theoretical debates within gender and development field on topics such as structural adjustment, feminization of labor force, and poverty alleviation. Examination of efforts by governments, international policy-making institutions, and civil society organizations to make economic policies and structures gender-equitable. 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 (when scheduled). Designed for seniors/juniors. Topics include women and family, women in Confucian ideology, women in literati culture, feminism, women and communism revolution. P/NP or letter grading.

171A. Women, Gender, and Law: Jurisprudence of Sexual Equality. (4) Lecture, four hours. Requisite: course 10 or Political Science 10 6 or 9. Recommended: course 110A or 110B or M110C. Exploration of models of equality described and/or advocated by legal theorists primarily in the U.S. — equality of opportunity for women, equality of result for women, non-result equality, etc. — using specific problems of women (e.g., sexual harassment, pregnancy leave policy, access to safe and effective reproductive control technologies) for purposes of illustration and critique. Specific topics may vary by instructor (e.g., consideration of sexual equality theories to issues of gender equity, legal status of women in countries outside the U.S. or from perspectives of international human rights). May be repeated for credit with topic or instructor change. P/NP or letter grading.

M172. Afro-American Woman in U.S. (4) (Same as Afro-American Studies CM172.) Lecture, two and one-half hours. Designed for juniors/seniors. Topics include women and African-American society and as members of their biological 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/ seniors. Japanese women in Japanese and world history 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 (1940s to 1980s) to be arranged. P/NP or letter grading.

M174. Sociology of the 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, variant family patterns, family as an institution, and influence of contemporary society on the family. P/NP or letter grading.

M175. Women and Cities. (4) (Same as Urban Planning M175.) Lecture, three hours; discussion, one hour. 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 cities; (3) city planning, land use, and technology; (4) city planning, regionalism, and outer environment that reflect women's needs and interests. P/ NP or letter grading.

CM176. Comparative Media Literacy and Politics of Gender: Theory and Production. (4) (Same as Education CM176.) Seminar, three hours. Corequisite: course CM178L. Use of range of pedagogical approaches to the teaching 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. Concurrently scheduled with course CM178L. P/NP or letter grading.

CM178L. Critical Media Literacy and Politics of Gender: Laboratory. (2) (Same as Education CM178L.) Laboratory, two hours. Corequisite: course CM176.必修课程。Course work includes experience as integral component of course CM178. Concurrently scheduled with course CM278L. Letter grading.

M180B. Historical Perspectives on Gender and Science. (4) (Same as History M180B.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Historical cases illustrating how gender enters practices and concepts of science. Topics include gendered conceptions of nature, person, and man of science, role of women and Asian women writers in science, scientific investigations of women and feminism. P/NP or letter grading.

185. Special Topics in Women's Studies. (4) Lecture, three hours. Preparation: one prior women's studies course. Topics include Specialized or advanced study in one area within women's studies. May be repeated for credit with topic and/or instructor change. P/NP or letter grading.


M186A. Global Feminists Since 1850 to the Present. (4) (Same as History M186A.) Lecture, three hours; discussion, one hour (when scheduled). Designed for juniors/seniors. Introduction to movements for women's rights (19th century) in Europe, Latin America, Asia, and the United States, analysis of the political order (1900 to 1930), and women, war, and empire (1930 to 1945). May be repeated for credit with topic or instructor change. P/NP or letter grading.

187. Senior Research Seminar: Women's Studies. (4) Seminar, three hours. Requisites: courses 10, and 110A or 110B or M110C. Introduction to senior Women's Studies majors or minors. In-depth study of major theme in feminist 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. Letter grading.

M191D. Topics in Queer Literatures and Cultures. (5) (Same as English, Gay, Bisexual, and Transgender Studies M191D.) Seminar, three or four hours. For seniors. Advanced or 110A or 110B or M110C. 1 credit. Topics include gender and sexuality as political and cultural components of gender and sexuality in society, and as members of their biological and ethnic group. P/NP or letter grading.

M191E. Topics in Gender and Sexuality. (3) (Same as English 191E and Sexualities M191E.) Seminar, three or four hours. Enforced requisite: English Composition 3 or 4H. Consult Schedule of Classes for class, period, subject or topic to be studied in specific term. May be repeated for credit with topic or instructor change. P/NP or letter grading.

M191F. Topics in Feminist Knowledge Production: Early/Modern. (4) (Same as English M191F and Feminist Studies M191F.) Seminar, three or four hours. Preparation: English Composition 3 or 4H. Enforced requisite: English Composition 3 or 4H. Enforced requisite: English Composition 3 or 4H. Consult Schedule of Classes for class, period, subject, or topic to be studied in specific term. May be repeated for credit with topic or instructor change. P/NP or letter grading.

199. Community or Corporate Internships in Women's Studies. (2 or 4) Tutorial, four hours. Requisites: course 110A or 110B or M110C. Internship opportunities with organizations that includes a substantial feminist component. May be repeated for credit. P/NP or letter grading.

201. Feminist Knowledge Production: Early/Modern. (4) Lecture/discussion, three hours. Examination of early and modernist feminist theories and epistemologies in context of global flows of people, ideas, and goods and in diverse socioeconomic settings. Evaluation of shifting forms of feminist knowledge production and multicultural critiques of theories of modernity. Letter grading.


203. Research Methods in Studies of Women and Gender. (4) Lecture/discussion, four hours. Preparatory: course 110A or 110B or M110C. May be repeated for credit with topic or instructor change. P/NP or letter grading.

204. Current Research in Women's Studies. (1) Seminar, to be arranged. Designed for graduate students. Examination of research of current faculty in women's studies. Letter grading.

205. Gender and Politics of Information. (4) Seminar, three hours. Examination of gendered dimensions of embedded in information technologies. Critical analysis of information as resource and commodity; impact of Internet and information technologies on women and men and gendered distinctions between who builds and who "owns" information technology resources; race, class, gender relations in cyberspace and electronic communications. Letter grading.

210. Topics in Women and Public Policy. (4) Lecture, four hours. Designed for graduate and professional students in women’s studies. 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., family, health, education, environment, labor, welfare, childcare). Topics may focus on public health, political science, economics, and social welfare. Letter grade.
215. Topics in Study of Sexuality and Gender. (4) Seminar, three to four hours. Designed for graduate students. Multidisciplinary studies on aspects of sexual orientation, gender identity, queer and transgender 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 Sexuality. (4) Seminar, three hours. Designed for graduate students. In-depth study of representations of gender and race in contemporary literature and performance culture, with special attention to race. Topics include flow of artistic cultural production across national borders, theorizing femalequeer as diasporic or multicultural formation. Letter grading.

M238. Feminist Theory. (4) (Same as Sociology 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.


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. Corequisites: courses M527B. 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.

M255. Cross-Cultural Perspectives on Gender. (4) (Same as Sociology M255.) Seminar, three hours. How does gender manifest itself in lives of different groups of women in U.S. and abroad? Are universal analyses of gender possible or is gender too different cross-culturally? S/U or letter grading.

M259A-M259B. History of Women. (4-4) (Same as History M259A-M259B.) Seminar, four hours. Corequisite: course M259A is requisite to M259B. History of women's social and political issues seen in U.S. and comparative context. In Progress (M259A) and letter (M259B) grading.

M261. Gender and Music in Cross-Cultural Per- spective. (4) (Same as Ethnomusicology M261.) Seminar, three hours. Designed to foster in-depth understanding of gender in study of music as culture. Topics range from ethnomusicology of gender and sexuality, (de)codification of messages of resistance, and gender representation to gender politics via musical production. S/U or letter grading.

M263P. Gender Systems. (4) (Same as Anthropology M263P.) Seminar, three hours. Current theoretical developments in understanding gender systems cross-culturally, with emphasis on relationship between systems of gender, economy, ideological systems, and social inequality. Selection of ethnographic cases from recent literature. S/U or letter grading.

M266. Feminist Theory and Social Sciences Re- search. (4) (Same as Education 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. Introduction especially to feminist standpoint theory, distinctive critical theory methodology now widely used in social sciences. Letter grading.

CM270. Alternate Traditions: In Search of Female Voices in Contemporary Literature. (5) (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.

CM278L. Critical Media Literacy and Politics of Gen- der: Theory and Production. (4) (Same as Educa- tion CM278L.) Seminar, three hours. Corequisites: 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.

285. Special Topics in Women's Studies. (4) Lecture/discussion, four hours. Designed for graduate students. Examination of specific 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 meeting, two hours. Preparation: satisfactory completion of Ph.D. program first year. Requisites: at least two courses from 201, 202, 210. Limited to program Ph.D. 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 superintendence 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 women's studies courses. May be repeated for credit. S/U grading.

596. Directed Individual Study or Research. (2 to 12) Tutorial, to be arranged. Requisites: courses 201, 202, 203. Directed individual research and study in area related to women's studies/gender studies, arranged individually by student with instructor. May be repeated for credit. S/U or letter grading.

597. Preparation for M.A. Comprehensive Exam- ination or Ph.D. Qualifying Examinations. (2 to 12) Tutorial, eight hours. Limited to graduate women's studies students. Reading and preparation for written M.A. comprehensive examination or Ph.D. qualifying field examinations. May be repeated for a maximum of 12 units. S/U grading.


Undergraduate Study

World Arts and Cultures B.A.

The World Arts and Cultures major leads to the Bachelor of Arts degree and is designed to offer choice and flexibility while maintaining balance and rigor. At the outset, students select one of two concentrations: dance or world arts and cultures. All students take a set of core courses designed to explore a wide range of artistic practices in cultural context. In addition, it is recommended that students selecting the dance concentration study movement techniques of their choice four to five days a week for the first two years of the program, while those concentrating in world arts and cultures must select 8 units of arts practice electives in movement, music, theater, film, design, or visual art — either within or outside the department.

In the junior year, students enroll in World Arts and Cultures 185 where they propose the final path of study for the senior year. World arts and cultures concentration students propose a senior honors project, or equivalent coursework, with faculty approval. Dance concentration students propose their senior-year course plan and have the option to propose a senior honors project (10 additional units). Students are guided in their proposals by the instructor and in consultation with their faculty mentors.

The dance concentration is grounded in contemporary choreography and offers courses in a range of idioms from throughout the world, including special emphasis on dance composition. Opportunities for performance, production, videography, and movement studies are augmented by courses in the study of the body and of bodily identity from historical and cultural perspectives, dance theory, and dance in the public sphere, including arts pedagogy and civic engagement. Multimedia forms of expression integrating music, theater, visual arts, film, and other technologies along with hybrid forms of cultural expression utilizing both emerging and classically based vocabularies are encouraged.

The world arts and cultures concentration emphasizes cultural studies through visual and performance arts, arts activism, and the dynamics of creativity in global perspective. Courses combine theory and practice and are grounded in diverse cultural artistic expressions, with topics including art as moral action, ethnography as colonialism, arts-based AIDS interruptions, body politics, documentary practice, theories of performance, curating cultures, space, and place, and indigenous spiritual traditions.

For both concentrations, 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 or women's studies).

Students who wish to confer with the departmental 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 two personal essays. 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. Students interested in the dance concentration 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.

Current UCLA students who petition to change their major are required to meet with the student affairs officer prior to application. They are advised to take selected departmental courses before and during the term in which they apply to the program. They must have a minimum 2.0 overall grade-point average and no more than 90 quarter units at the time of application. Students may apply at the beginning of Spring Quarter for admission into the program the following Fall Quarter. Those interested in the dance concentration are expected to participate in an audition. All students are interviewed as part of the application process.

Dance Concentration

The dance concentration consists of 103 units of coursework.

Preparation for the Major

Required: Dance 16, 44, 45, 67A, 67B, World Arts and Cultures 1, 2, 70, 85.

The Major

Required: (1) World Arts and Cultures 185; (2) 4 units in production practices from Dance 169, 171, World Arts and Cultures 174A, 174B, or other department courses with faculty approval; (3) 9 units in topics in dance studies, including World Arts and Cultures 101 and 4 units from Dance C145 through 167, World Arts and Cultures C146 through C168, 199, or from outside the department with faculty approval; (4) creative inquiry/research — Dance 117A, 117B; (5) civic engagement — World Arts and Cultures 100A or 100B or 103 and 4 units from Dance 166, 167, World Arts and Cultures 100A, 100B, 103, 144, 177SL, or from outside the department with faculty approval; (6) 4 additional elective units from Dance 116, 117C, World Arts and Cultures C180, or upper divi-
sion courses listed above, or outside the department with faculty approval. Students also have the option to propose a senior honors project through World Arts and Cultures 186A and 186B.

Movement Arts/Dance Practices — Required: A total of 36 units from Dance 6 through 15, 56 through 65, C106A through C115, World Arts and Cultures 5, 55, 78, and 178, including a minimum of 6 units of advanced upper division coursework in any genre. Twenty units must be at the intermediate/advanced levels in two different genres; one genre must be modern/post-modern for a minimum of 6 units from Dance 65 or C115. No more than 8 units of World Arts and Cultures 78 or 178 may be applied toward the total 36-unit requirement.

World Arts and Cultures Concentration

The world arts and cultures concentration consists of 89 units of coursework.

Preparation for the Major

Required: World Arts and Cultures 1, 2, 20, 21, 70, 85; 8 units in world arts practice elective selected from Dance 6 through 16, 56 through 59, World Arts and Cultures 5, and 55 (4 units must be taken within the department; 4 units may be from outside the department); and one course from World Arts and Cultures 22, 24, 33, or 44.

The Major

Required: (1) World Arts and Cultures 100A or 100B, 101, 105, 185A, and 186B, or equivalent coursework with faculty approval; (2) 8 units in locating cultures in which students select a geographical/cultural focus from either inside or outside the department with faculty approval; (3) 4 units in arts/activism/community engagement selected from Dance 166, 167, World Arts and Cultures 103, M125A, M125B, M125C, 144, C168, or other courses with faculty approval; and (4) 20 units from one of three commitment areas — studies in culture and performance, interdisciplinary/intercultural creative work, or integrated studies — selected from approved course lists (see department counselor), in which all units must be taken within the department.

Senior Honors Project

World Arts and Cultures 186A and 186B lead to a senior honors project that has three possible areas of focus — performance, applied research, or studies in culture and performance: (1) the performance project is a creative project leading to the production and public performance of original or traditional work; (2) the applied research focus implies an application of knowledge in a hands-on situation and includes projects in and with the community or campus; and (3) the culture and performance focus involves students in independent ethnographic research in some aspect of the arts. This project is optional for the dance concentration. Students in the world arts and cultures concentration may choose to complete courses 186A and 186B, or two equivalent courses with faculty approval. All students wishing to complete a senior honors project must submit a proposal and receive faculty approval.

Graduate Study

Official, specific degree requirements are detailed in Program Requirements for UCLA Graduate Degrees, available at the Graduate Division website, http://www.gdnut.edu/gasaa/library/pgmrqintro.htm. 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 (M.A.) and Doctor of Philosophy (Ph.D.) degrees in Culture and Performance and a Master of Fine Arts (M.F.A.) degree in Dance.

Dance Lower Division Courses

6. Beginning World Arts Practices in Sub-Saharan Africa and Diaspora. (2) (Formerly numbered World Arts and Cultures 6.) Studio, three hours. Beginning-level study of world arts practices originating from sub-Saharan Africa and extending to cultures of African diaspora, including Brazil and Afro-Caribbean. Variable topics, such as dance of Guinea, Mali, and Senegal or Afro-Caribbean, in cultural and historical context. May be repeated for credit without limitation. P/NP or letter grading.

7. Beginning World Arts Practices in Middle East/ North Africa and Diaspora. (2) (Formerly numbered World Arts and Cultures 7.) Studio, three hours. Beginning-level study of world arts practices originating from Middle East and North Africa. Variable topics, such as belly dancing or Israeli folk dance, in cultural and historical context. May be repeated for credit without limitation. P/NP or letter grading.

8. Beginning World Arts Practices in Latin America and Diaspora. (2) (Formerly numbered World Arts and Cultures 8.) Studio, three hours. Beginning-level study of world arts practices originating from Latin America, including cultures of South and Central America. Variable topics, such as Argentine tango and Mexicolouric dancing, in cultural and historical context. May be repeated for credit without limitation. P/NP or letter grading.

9. Beginning World Arts Practices in North America and Diaspora. (2) (Formerly numbered World Arts and Cultures 9.) Studio, three hours. Beginning-level study of world arts practices originating from North America, including U.S., Canada, and Native America. Variable topics, such as Native American dance, jazz, and jazz-tap, in cultural and historical context. May be repeated for credit without limitation. P/NP or letter grading.

10. Beginning World Arts Practices in East Asia and Diaspora. (2) (Formerly numbered World Arts and Cultures 10.) Studio, three hours. Beginning-level study of world arts practices originating from East Asia, including China, Korea, and Japan. Variable topics, such as movement and music techniques of Beijing Opera, Korean shamanic movement practices, and Kabuki theater, in cultural and historical context. May be repeated for credit without limitation. P/NP or letter grading.

11. Beginning World Arts Practices in South Asia and Diaspora. (2) (Formerly numbered World Arts and Cultures 11.) Studio, three hours. Beginning-level study of world arts practices originating from South Asia and extending to cultures of South Asian diaspora, including communities in England and West Africa. Variable topics, such as Bharata Natyam (classical dance of India), bhangra (diasporic social dance), and hatha yoga, in cultural and historical context. May be repeated for credit without limitation. P/NP or letter grading.

12. Beginning World Arts Practices in Southeast Asia and Diaspora. (2) (Formerly numbered World Arts and Cultures 12.) Studio, three hours. Beginning-level study of world arts practices originating from Southeast Asia. Variable topics, such as Cambodian classical court dance, Indonesian kechak, or Balinese legong, in cultural and historical context. May be repeated for credit without limitation. P/NP or letter grading.

13. Beginning World Arts Practices in Europe and Diaspora. (2) (Formerly numbered World Arts and Cultures 13.) Studio, three hours. Beginning-level study of world arts practices originating from Europe and extending to cultures of European diaspora, including U.S. Variable topics, such as flamenco, Balkan folk dances, and classical ballet, in cultural and historical context. May be repeated for credit without limitation. P/NP or letter grading.

14. Beginning Modern/Postmodern Dance. (2) (Formerly numbered World Arts and Cultures 14.) Lecture, three hours. Study of dance technique. Critical viewing, reading, and discussion of modern/postmodern dance artists’ work. May be repeated twice for credit. P/NP or letter grading.

15. Beginning Improvisation in Dance. (2) (Formerly numbered World Arts and Cultures 15.) Laboratory, four hours. Study of dance technique. Critical viewing, reading, and discussion of modern/postmodern dance artists’ work. May be repeated twice for credit. P/NP or letter grading.
and how various artists have worked with place in construction of new dances. Use of these analyses to assist in creative process for making new dances. P/NP or letter grading.

117B. Theories and Methods in Dance Composition IV: Impacts. (4) (Formerly numbered World Arts and Cultures 117B.) Seminar, two hours; studio; two hours. Enforced requisites: courses 16, 67A, 67B. Examination of relation of dance to its audience. Synthesis of analyses undertaken in previous courses to determine how dance moves their viewers. How do dances appeal to or address their audiences? How do dance vocabulary, sequencing, and location combine to create particular effects? Answers to these questions in relation to broad range of artistic approaches, acknowledging that dance-making occurs distinctively in different cultural contexts and different historical moments. Different approaches to dance-making are explored through use of range of locations for dances, including proscenium stages, theaters in round, parks, sidewalks, temples, and its relationship to other art forms. Lectures illustrated with demonstrations, films, and slides. P/NP or letter grading.

117C. Advanced Topics in Choreography. (4) (Formerly numbered World Arts and Cultures 117C) Lecture, four hours; studio, two hours; outside study, six hours. Enforced requisites: courses 16, 67A, 67B. Directed exploration in composition with focus on developing works that engage two or more disciplines, such as dance, music, visual art, performance art. Theoretical engagement with selected topics through lectures, readings, and discussions. May be repeated for credit without limitation. P/ NP or letter grading.

118. Advanced Interdisciplinary Composition. (4) (Formerly numbered World Arts and Cultures 118.) Lecture, four hours; studio, two hours. Enforced requisites: courses 67A, 67B. Directed exploration in composition with focus on works that engage techniques and practice in one or more cultures. Study of postcolonial theory through lectures, readings, and discussions. May be repeated for credit without limitation. P/NP or letter grading.

119. Advanced Intercultural Composition. (4) (Formerly numbered World Arts and Cultures 119.) Lecture, four hours; studio, two hours. Enforced requisites: courses 67A, 67B. Directing exploration in composition with focus on works that engage techniques and practice in one or more cultures. Study of postcolonial theory through lectures, readings, and discussions. May be repeated for credit without limitation. P/NP or letter grading.

121. Advanced Improvisation in Dance. (2) (Formerly numbered World Arts and Cultures 121.) Studio, four hours. Development of aesthetic perspective through use of imagery, sound, and other art. Concentration and execution. May be repeated twice. P/NP or letter grading.

117A. Theories and Methods in Dance Composition I: Languages. (4) (Formerly numbered World Arts and Cultures 117A.) Lecture, two hours; studio, two hours; outside study, eight hours. Enforced requisites: course 65. Studies in advanced modern/postmodern dance technique, with emphasis on performing skills. May be repeated for credit without limitation. Concurrently scheduled with course C415. P/NP or letter grading.

116. Advanced Improvisation in Dance. (2) (Formerly numbered World Arts and Cultures 116.) Studio, four hours. Development of aesthetic perspective through use of imagery, sound, and other art. Concentration and execution. May be repeated twice. P/NP or letter grading.

115. Advanced Modern/Postmodern Dance. (2) (Formerly numbered World Arts and Cultures 115.) Studio, six hours. Enforced requisites: course 65. Studies in advanced modern/postmodern dance technique, with emphasis on performing skills. May be repeated for credit without limitation. Concurrently scheduled with course C415. P/NP or letter grading.

114. Dance in Multicultural U.S. (4) (Formerly numbered World Arts and Cultures 114.) Lecture, two hours; discussion, one hour; laboratory, one hour. Enforced for juniors/seniors. Study of dance in U.S. culture and society. Class Study Topics to be offered in specific term. May be repeated for credit without limitation. Concurrently scheduled with course C222. P/NP or letter grading.
150. History of Dance in Culture and Performance. (4) (Formerly numbered World Arts and Cultures 150.) Lecture, two hours; discussion, one hour; laboratory, two hours. Study of dance in historical and cultural context, its function in society and its relationship to contemporary artistic expression. Focus on topics from traditional and recent research in world dance. P/NP or letter grading.

C152. History and Theory of Modern/Postmodern Dance. (4) (Formerly numbered World Arts and Cultures C152.) Lecture, four hours; studio, two hours; outside study, six hours. Introduction to key figures in creation of modern dance, with special attention to their theories and philosophies 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 writing. Concurrently scheduled with course C252. P/NP or letter grading.

M157. Rechoeographing Disability. (Formerly numbered World Arts and Cultures 157.) 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 writing about experiences of disability and process of making work about disability by key artists and thinkers, introduction to concept of choreography as pedagogy and as a form of activism, in order to present and interpret movement and organization of bodies, as well as choreography as poetic form for expression of ideas, creative tool, or product. Viewing and discussion of works that emphasize movement through movement and dance-making. P/NP or letter grading.

158. Choreographing Gender. (4) (Formerly numbered World Arts and Cultures 158.) Lecture, three hours; laboratory, two hours. Designed for juniors and 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) (Formerly numbered World Arts and Cultures 159.) 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.

160. Topics in Body Mechanics. (4) (Formerly numbered World Arts and Cultures 160.) Lecture, three hours; studio, one hour. Designed for juniors/seniors. Variable topics course with discussion of injury prevention, anatomy, and how the body functions. Advanced topics that have reached level of self-initiation of substantial creative works. Refinement and realistic self-evaluation; critical counsel by acknowledged choreographers. S/U or letter grading.

C161. Movement Observation and Analysis. (4) (Formerly numbered World Arts and Cultures 161.) Lecture, two hours; laboratory, two hours. Designed for juniors/seniors. Use of variable theoretical frameworks 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) (Formerly numbered World Arts and Cultures 165.) Lecture, two hours; laboratory, three hours. Introduction to movement concepts, skills, and teaching principles for modern dance education. Supervised teaching practicum included. P/NP or letter grading.

166. Dance as Culture in Education. (4) (Formerly numbered World Arts and Cultures 166.) Lecture, two hours; laboratory, two hours. Theoretical and practical aspects of teaching dance, especially in higher education. P/NP or letter grading.

167. Creative Dance for Children. (4) (Formerly numbered World Arts and Cultures 167.) Lecture, three hours; laboratory, one hour. Introduction to movement education. Principles for teaching children's dance; emphasis on dance as creative medium of expression. P/NP or letter grading.

168. Repertory Tour Ensemble. (2 or 4) (Formerly numbered World Arts and Cultures 168.) Lecture, two hours; studio, four to six hours. Designed for World Arts and Cultures majors. Creation and presentation of performances in community, with special emphasis on problems of touring companies with variable repertoire. May be repeated once. P/NP or letter grading.

C171. Dance Production: Variable Topics. (4) (Formerly numbered World Arts and Cultures 171.) Lecture, four hours; laboratory, two hours. Foundational experience in range of dance production processes, including but not limited to lighting design, set design, costume design, and 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 C271. P/NP or letter grading.

182. Dance and Visual Media. (4) (Formerly numbered World Arts and Cultures 182.) Lecture, four hours. Examination of aesthetic differences between dance and the visual arts, analysis and exploration of new aesthetic trends. May be repeated twice. P/NP or letter grading.

C184. Production Arts Seminar. (4) (Formerly numbered World Arts and Cultures C184.) Seminar, four hours. Theory and practice of production administration for dance, emphasizing roles and responsibilities for producing public events in arts and academia. Topics include, but are not limited to, history and theories of producing, mission statements, budgeting, marketing, public relations, legal issues, and policies. Concurrently scheduled with course C243. P/NP or letter grading.

Graduate Courses

211A-211F. Advanced Choreography. (4 each) (Formerly numbered World Arts and Cultures 211A-211F.) Lecture, two hours; studio, two hours. Theoretical aspects of advanced choreography. Topics include, but are not limited to, historical and theoretical components. May be repeated once. P/NP or letter grading.

222. Music and Dance Collaborations. (4) (Formerly numbered World Arts and Cultures 222.) Studio, four hours. Opportunity for directors, choreographers, and composers to work together creating and developing material in their respective disciplines. Exploration of different forms and ways of approaching creative process of making dance and music, presenting material, and working as a composer and choreographer. S/U or letter grading.

252A-252B. Theories of Movement: Labananalysis. (4-6 each) (Formerly numbered World Arts and Cultures 252A-252B.) Lecture, two hours; laboratory, two hours. Theories of Laban movement analysis as means for analyzing and describing human movement. Use of Laban movement analysis to increase movement observation skills and theoretical understanding of role of movement in dance, nonverbal behavior, and cross-cultural dance studies. Focus on complex movement patterns and timing. S/U or letter grading.

230. Research Methods and Bibliography in Dance. (4) (Formerly numbered World Arts and Cultures 230.) Lecture, four hours. Survey of methods for scholarly analysis of dance materials using systems from social science, physical sciences, and humanities. S/U or letter grading.

C243. Production Arts Seminar. (4) (Formerly numbered World Arts and Cultures C243.) Seminar, four hours; studio, two hours. Laboratory, two hours. Advanced modern/postmodern dance technique, with emphasis on process and design. May be repeated for credit without limitation. Concurrently scheduled with course C171. S/U or letter grading.

C271. Dance Production: Variable Topics. (4) Lecture, four hours; laboratory, two hours. Foundational experience in range of dance production practices, including but not limited to lighting design, set design, costume design, and 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.

C409A. Advanced World Arts Practices in North America and Diaspora. (2) (Formerly numbered World Arts and Cultures C409A.) Studio, three hours; outside study, three hours. Advanced-level study of world arts practices originating from North America, including U.S., Canada, and Native America. Variable topics such as Native American dance, jazz, and jazz-tap, in cultural and historical context. May be repeated for credit without limitation. Concurrently scheduled with course C109A. S/U or letter grading.

C413A. Advanced World Arts Practices in Europe and Diaspora. (2) (Formerly numbered World Arts and Cultures C413A.) Studio, three hours; outside study, three hours. Advanced-level study of world arts practices originating from Europe and Diaspora. Variable topics such as flamenco, Balkan folk dances, and classical ballet, in cultural and historical context. May be repeated for credit without limitation. Concurrently scheduled with course C113A. S/U or letter grading.

C415. Advanced Modern/Postmodern Dance. (2) (Formerly numbered World Arts and Cultures C415.) Studio, six hours. Requires: course C65, Study in advanced modern/postmodern dance technique, with emphasis on performance skills. May be repeated for credit without limitation. Concurrently scheduled with course C155. S/U or letter grading.

441. Dance Production Practicum. (2 to 4) (Formerly numbered World Arts and Cultures 441.) Laboratory, four to eight hours (one or two hours may be individualized consultation). Skills in understanding of production concepts in roles of stage manager, production assistant, and producer. May be repeated for maximum of 8 units. S/U grading.

452. Directed Field Study in Dance Education. (2 to 8) (Formerly numbered World Arts and Cultures 452.) 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 4 units may be applied toward M.A. degree requirements. S/U grading.

490. Projects in Choreography and Performance. (2 to 8) (Formerly numbered World Arts and Cultures 490.) Tutorial, one through four units per week minimum. Creation, casting, and rehearsing of culminating concert, reflecting professional achieve-
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 interactions among various modes of creative expression, teamwork in daily life, and transformative representation of cultural identity and difference. May be repeated for credit. Letter grading.

2. Lower Division Seminar. (5) Formerly numbered 2AL 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 cultural context, interdisciplinary 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, activism, and other topics pertaining to broad fields of culture, performance, and dance. Research inquiry methods may include readings, assigned written analysis, supervised fieldwork, individual and collaborative assignments, and practice-oriented processes. Substantial culminating project integrating theoretical and practical components of selected seminar topic required. May be repeated for credit. Letter grading.

5. Beginning Global and Transcultural Forms. (2) Studio, three hours. Beginning-level study of world arts practices crossing 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 limit. P/NP or letter grading.

20. Culture: Introduction. (5) Lecture, four hours. Introduction to key concepts and major theoretical and methodological debates that characterize field of cultural studies, discussion of notions of culture, popular culture, subculture, youth culture, hegemony, gender, race, class, and national identity. Letter grading.

21. Introduction to Field-Based Research. (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, and limitations, and results not only tangible and impartial outcomes of inquiry but also personal and tangible. Through readings, discussion, exams, and fieldwork, students learn to plan fieldwork projects and write proposals, prepare consent forms and deal with ethical issues, observe behavior, construct questionnaires, interview, use audiovisual documentation, and manage and present data. P/NP or letter grading.

22. Introduction to American Folklore Studies. (5) Lecture, four hours; discussion, one hour; outside study, 10 hours. Survey of various forms of folklore and approaches to their identification, description, and analysis, including their historical and social significance. Introduction to ethnography of performance and for topics to be offered in specific term. May be repeated for credit without limit. P/NP or letter grading.

M23. Introduction to American Indian Studies. (5) Formerly numbered 2AL Seminar, four hours; outside study, 11 hours. Survey of selected Native North American cultures from pre-Western contact to contemporary period, with particular emphasis on early cultural diversity and its historical and social implications of epistemological differences between people. Examination of critical perspectives on social development, historical progress, and worldviews, including, but not limited to, limited to theoretical, performative, 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 limit. P/NP or letter grading.

78. Private Instruction in World Arts and Cultures. (1 to 4) For credit without limit. P/NP or letter grading.

201. Theories of Performance. (5) Lecture, three hours; discussion, one hour. Recent discussions of multiculturalism have demanded broader base of cultural literacy for society in general and three artists in particular. Consult beyond stereotyping and formalism, focus on areas of overlap and exchange, collaborations, collective creation, hybridization, and evolving possibilities of video and extended media. P/NP or letter grading.

101. Theories of Performance. (5) Lecture, four hours; studio, two hours. Requisite: course 85. Performance commonly refers to activities on proscenium stage, explosion of that narrow notion of performance by delving into scholarship from young field of performance studies, which draws on disciplines of anthropology, cultural studies, gender studies, linguistics, postcolonial theory, and sociology. Exploration of stutdio of concept of performing theory by creating interdisciplinary performance works that engage with and amplify theories studied. P/NP or letter grading.

120. Introduction to Folklore. (4) Lecture, four hours. Survey of various of folklore and approaches to their identification, description, and analysis, including their historical and social significance. Introduction to ethnography of performance and for topics to be offered in specific term. May be repeated for credit without limit. P/NP or letter grading.

M125A. Beyond Mexican Mural: Beginning Muralism and Community Development. (4) Same as Art 125A. Lecture, four hours; discussion, one hour. Study of cultural strategies of moral engagement, persuasion, and inquiry in personal and public life, including acts of conscience and civil disobedience. P/NP or letter grading.

103. Arts in Communities. (5) Lecture. Recent discussions of multiculturalism have demanded broader base of cultural literacy for society in general and three artists in particular. Consult beyond stereotyping and formalism, focus on areas of overlap and exchange, collaborations, collective creation, hybridization, and evolving possibilities of video and extended media. P/NP or letter grading.
M128. Chicana Art and Artists. (4) Lecture, four hours. Designed for seniors. Course concentration will be on selected material and cultural theory and with theoretical and methodologies utilized in their analysis. P/NP or letter grading.

132. Narrative and Oral Performance. (4) Lecture, four hours. Survey of concepts of text as text versus narratives as action as performing narrative. Narrators, how stories are composed in performance, interaction of narrator and audience, how place and experience become embodied in narratives, modes of representing oral narrating, and politics, stories and oral performance. P/NP or letter grading.

133. Textiles of World. (4) Lecture, four hours; discussion, one hour; laboratory, one hour. How cloth and clothing are made and worn 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.


135. African Populism. (4) Lecture, three hours. Introduction to problems and issues in study of popular arts in sub-Saharan Africa. Lectures, readings, and audiovisual materials on broad spectrum of creative and popular visual and plastic arts, literature, performed genres such as music, poetry, theater, and dance, and everyday practices such as hair weaving, housepainting, personal adornment, and joke telling. P/NP or letter grading.

M136. Culture of Jazz Aesthetics. (4) Same as Anthropology M142R and Ethnomusicology M130C. Lecture, three hours. Required: course 20 or Anthropology 9 or 33 or Ethnomusicology 0 or 20B or 202. 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 on jazz, interpretations. Analytical resources and historical knowledge of musicians and ethnomusicologists combined with those interested in jazz as cultural tradition. P/NP or letter grading.


CM140. Women Healers, Ritual, and Transformation. (4) Same as Women’s Studies CM143. Lecture, four hours; outside study, eight hours. Designed for juniors/seniors. Examination of role of women 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 CM240. P/NP or letter grading.

C141. 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 CM240. P/NP or letter grading.

142. Myth, Magic, and Mind. (4) Lecture, four hours; outside study, eight hours. Designed for juniors/seniors. Consideration of metaphor and symbol, reflex- ive anthropology, and notion of culture as text applied to such examples as trickster figures, rhetorical devices including parable and irony, and arguably magical experience of humans “shape-shifting” to become animals. Concurrently scheduled with course C242. P/NP or letter grading.

143A. Introduction to Museology: Museum Collections and Administration. (5) Lecture, six hours. Introduction to history and functions of museums, tracing development to present. Collection, organization, man- agement, and conservation of objects and legal and ethical issues surrounding these practices. P/NP or letter grading.


C143C. Introduction to Museology: Selected Topics. (4) Seminar, six hours; individual study, six hours. Stu- dents pursue individually designed projects, working with staff members and museum directors to produce papers on contemporary issues in museums. For example, one student might work under curator and help develop a permanent exhibition on such issues as they pertain to contemporary museums, following sug- gested reading list. P/NP or letter grading.

144. Make Art/Stop AIDS. (5) Lecture, four hours; 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 powerfully effect- ive tool in AIDS prevention and treatment efforts. Re- view of literature of AIDS crisis that emerged in late 1980s in U.S. and application of that literature to international hotspots such as India, Chi- na, South Africa, and Brazil. Collaborative theory-in- action seminar. P/NP or letter grading.

146. Politics of Performance. (4) Seminar, four hours; outside study, eight hours. Designed for juniors/ seniors. Opportunity to reflect on artists and intellectu- als as cultural workers operating in domains of idio- ty, aesthetics, and theory. Analysis of such keywords as ideology, aesthetics, theory, art, politics, interven- tion, intellectuals, and artists. Concurrently scheduled with course C246. P/NP or letter grading.

147. Dance and Healing. (4) Lecture, four hours. In- terdisciplinary, contemporary arts-based model of healing applicable to persons leading Western mod- ern lifestyles and coping with a variety of social is- sues during their lifetimes: (1) developmental transitions that are disruptive life-cycle changes that have poten- tial to promote self-regeneration or self-fragmentation and (2) external transitions that are situational cata- strophic events that evoke great terror and trigger fears of annihilation and chaos, but if successfully negotiat- ed, have potential to promote revitalized sense of self, greater compassion for others, and restored sense of trust and hope in humanity. Concurrently scheduled with course C247. P/NP or letter grading.

148. Dance as Healing and Therapy. (4) Lecture, two hours; laboratory, two hours; outside study, eight hours. Designed for juniors/seniors. Intro- duction to historical, theoretical, methodological, and ethical considerations involved in practice of dance as healing and therapy. Concurrently scheduled with course C248. Letter grading.

C155. Self and Culture. (4) Lecture, two hours; labo- ratory, two hours; outside study, eight hours. Designed for juniors/seniors. Examination of critical developmen- tal processes and situational factors contributing to construction of sense of self and emergence of creativ- ity and subjective relatedness in different cultural con- texts. Concurrently scheduled with course C255. P/NP or letter grading.

156. Frida Kahlo: Creation of Cultural Icon. (5) Lecture, four hours. Examination of life of renowned Mexican artist Frida Kahlo in light of (1) Mexico’s politi- cal, religious, and social history that gave rise to me- stiza and machismo, two social conditions that strongly influenced construction of her mestiza and gender identity, as well as her revolutionary political ideals, (2) debates that 20th-century Mexican living in par- triarchal societies had to confront, (3) way her signifi- cant attachment influenced her construction of sub- jective sense of self and kinds of artwork she pro- duced, and (4) the transcendent and the transcendent functions her self-portraits served in maintaining her emotional equilibrium, (5) conversion of Kahlo’s image after her death into cultural icon by culturally disenchanted groups, and (6) psychosocial conditions and process-
es that tend to promote creation of cultural icons. Concurrently scheduled with course C256. P/N or letter grading.

C164. Public Writing in Arts. (4) Lecture, four hours; outside study, eight hours. Survey of journalistic approaches to writing about arts, with eye toward shaping critique of public writing practices and putting that critique into practice. Emphasis on new modes of venue (and venues for) writing that rebalance power differential between art makers and commentators. Concurrently scheduled with course C264. P/N or letter grading.

C168. Writing and Academia: Making Art in Real World. (4) Lecture, four hours; outside study, eight hours. Designed for juniors/seniors. 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 C268. P/N or letter grading.

170. Advanced Production. (1) Laboratory, three hours; Requisite: course 70. Further development and application of technical and administrative support practices in producing events in world arts and cultures, including but not limited to theatrical support and planning and executing lecture series. May be repeated for credit without limitation. P/N grading.

C173. Sound Resources for Performance. (4) Lecture, three hours; studio, one hour; outside study, eight hours. Designed for juniors/seniors. Exploration of music in, 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 presentations of research results. Concurrently scheduled with course C273. P/N or letter grading.

174A. 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/N or letter grading.

174B. Projects in World Arts and Cultures. (4) Laboratory, six hours. Individualized major projects in choreography, performance, cultural studies, production, and media. May be repeated for credit. P/N or letter grading.

177SL. Taking Action: Arts Practice and Community Service. (4) Seminar, four hours; outside study, eight hours; eight hours, design and production of media. Application of training in world arts and cultures through service projects designed by students. Service projects include representations of body, body symbolism, emblem of identity, food and its emotional significance, aversions and taboos, advertising, changing food habits, and American diet. Concurrently scheduled with course C129. S/U or letter grading.

180. Video Production in Arts. (4) Lecture, one hour; laboratory, three hours. Fundamentals of video production: conceptualization, field recording (camera, lighting, sound, and editing); organizational, raw footage, constructing program, mastering finished tape). Emphasis alternates quarterly between ethnographic documentary and dance/choreography. May be repeated once for credit. Concurrently scheduled with course C280. Letter grading.

181. Ethnographic Film. (4) Lecture, four hours. Survey of ethnographic film and video, with focus on studies of ethnographic recording and analysis of social and cultural dynamics. May be repeated once for credit. Concurrently scheduled with course C280. Letter grading.

C183. Film and Folklore. (4) Lecture, three hours. Designed for juniors/seniors. Introduction to film criticism and folklore methodology. Topics include early examples of folklore on film, changing conceptions of folklore and uses of films about folklore, and examples of films by, with, and for folklorists. Concurrently scheduled with course C416. S/U or letter grading.

185. Junior-Year Proposal. (1) Lecture, 90 minutes; outside study, 90 minutes. Requisite: course 85. Limited to World Arts and Cultures majors. Planning and execution of proposal (either senior focus or senior honors thesis). Emphasis on dealing with curricular and exploring resources of department and University as whole. May be repeated once for credit. P/N grading.

186A-186B. Senior Honors Projects in World Arts and Cultures. (5-8) Lecture, four hours; outside study, 11 hours; internship. Course 186A is required. Course 186A is required. Course 186B is required. Limitless to senior World Arts and Cultures majors. Application of concepts and content from interdisciplinary major to individual projects. Methodologies may include critical, comparative, ethnographic, and performance approaches. Lecture/semester format with World Arts and Cultures faculty during first term; faculty-directed presentations of individual projects during second term. Letter grading.

195. Community or Corporate Internships in World Arts and Cultures. (2 to 4) Tutorial, six hours. Internship in supervised setting in community agency or business, exploring connections with community interest. May be repeated for credit. P/N or letter grading.

199. 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 report may be required. May be repeated for maximum of 8 units. Individual contract required. P/N 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 world “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 studies of performance and related aesthetic practices. Familiarization with ways in which “performance” is defined and deployed by scholars working in disciplines of anthropology, dance, folklore, musicology, musical performance studies, philosophy, sociology, and theater. S/U or letter grading.

202. Research Methodologies. (4) Not same as course 202 prior to Fall Quarter 2009.) Seminar, three hours; outside study, nine hours. Survey of theoretical issues and problems in study of dance and body movement in cultural, social, and historical context. S/U or letter grading.

203. Proseminar: Dance Studies. (4) Seminar, three hours; outside study, nine hours. Survey of theoretical 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), representation of body in religious and other contexts. S/U or letter grading.

205. Folklore Theories and Methods. (4) Lecture, three hours; outside study, nine hours. Introductory course in history, analytic perspectives, and current trends, including research techniques in contemporary folkloristics. S/U or letter grading.

206. Folklore Seminar. (4) Seminar, three hours; outside study, nine hours. Variable topics. Detailed consideration of particular folk genres, cultural area, historical period, and/or theoretical issue in field of folklore. May be repeated for credit. S/U or letter grading.

207. Ethnography of Performance. (4) (Formerly numbered 202.) Seminar, three hours; outside study, nine hours. Survey of methods and methodological issues in ethnographic study of performance in cultural context. Field documentation, participant observation, oral history and interview techniques, performative dimensions of ethnographic research, ethics, and politics of ethnographic representation. S/U or letter grading.

210. Ethnography of and as Colonialism. (4) Seminar, three hours. Beginning students reading on Indian human and ranging to contemporary scholarship about and by indigenous peoples, focus on intersection of writing, colonialism, violence, and historiography in Americas. Exploration of the relationship between 16th-century 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 examples throughout U.S. southwest, plains, and northeast. S/U or letter grading.

216. Analyzing Narrative and Oral Performance. (5) Lecture, four hours. Designed for graduate students. Examination of ways that narrator and interpreting their styles and repertoires; how narrators conceptualize and perform narrative discourse, impact of audience and situated event on both narrating and story, how experiences and values are communicated through narrating, modes of representing oral narrating, and 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 study of expressive culture, arts, and performance in social and historical context. May be repeated for credit without limitation. S/U or letter grading.

222. Arts of Identity: Survey of Expressive Cultures. (4) Lecture, four hours; outside study, eight hours. Introduction to study of arts, performance, and creativity in cultural context. Special attention to relationship between arts and identity and to role of artists in cultural survival and transformation. Concurrently scheduled with course C123. S/U or letter grading.

229. Food Customs and Symbolism. (4) Lecture, three hours; outside study, nine hours. Designed for graduate students. Variable topics in interdiscipli- study of expressive culture, arts, and performance in social and historical context. May be repeated for credit without limitation. S/U or letter grading.


240. Women Healers, Ritual, and Transforma- tion. (4) (Same as Women’s Studies CM240.) Lecture, four hours; outside study, eight hours. Designed for graduate students. Examination of role of women healers, practitioners, and community leaders in African-American and Caribbean. S/U or letter grading.

CM240. Women Healers, Ritual, and Transforma- tion. (4) (Same as Women’s Studies CM240.) Lecture, four hours; outside study, eight hours. Designed for graduate students. Examination of role of women healers, practitioners, and community leaders in African-American and Caribbean. S/U or letter grading.
C247. Myth, Magic, and Mind. (4) Lecture, four hours; outside study, eight hours. Designed for gradu- 
ate students. Consideration of metaphor and symbol, reflexive anthropology, and notion of culture as text ap- 
pplled to understanding tricky figures, rhetorical devices including parable and irony, and arguably mag- 
ical experience of humans “shape-shifting” to become animals. Concurrently scheduled with course C142. S/ 
U or letter grading.

244. Folk Medicine. (4) Seminar, three hours; out- 
side study, nine hours. Exploration of fundamental con- 
cepts, analytical approaches, and recurrent questions in 
research on folk and traditional medicine, including 
categories and motivations of healers, varieties of ill- 
ness, and treatment modalities such as use of faith- 
and plant-based remedies, along with issues about persistence, efficacy, and development of culturally 
sensitive healthcare. S/U or letter grading.

245. Politics of Performance. (4) Seminar, four 
hours; outside study, eight hours. Designed for gradu- 
ate students. Opportunity to reflect on artists and intel- 
lectuals who are cultural workers operating in domains of 
paediology, aesthetics, and theory. Analysis of such key- 
words as ideology, aesthetics, theory, art, politics, in- 
tervention, intellectuals, and artists. Concurrently scheduled with course C146. S/U or letter grading.

247. Arts and Healing. (4) Lecture, four hours. Inter-
disciplinary, contemporary arts-based model of 
healing applicable to persons leading Western mod- 
ernist lifestyles and coping with two kinds of illness or 
critique of public writing practices and putting that 
outside study, eight hours. Survey of journalistic ap-
proaches to writing about arts, with eye toward shap-
ing of cultural icons. Consideration of such practical issues as publicity and grant-writing. 
Concurrently scheduled with course C168. S/U or let-
ter grading.

273. Sound Resources for Performance. (4) Lect-
ure, three hours; studio, one hour; outside study, eight 
hours. Designed for graduate students. Exploration of 
music, in search of new and unusual. In-
vestigation 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 presenta-
tions of research results. Concurrently scheduled with 
course C173. S/U or letter grading.

280. Video Production in Arts. (4) Lecture, one hour; 
laboratory, three hours. Fundamentals of video pro-
duction: conceptualization, field recording (camera, 
lighting, sound, coverage), and editing (organizing raw 
footage, constructing program, mastering finished 
tapes). Emphasis alternates quarterly between ethno-
graphic documentary and dance/choreography. May 
be repeated once for credit. Concurrently scheduled 
with course C180. Letter grading.

283. Film and Folklife. (4) Lecture, three hours. 
Designed for graduate students. Introduction to film, 
criticism and folklore methodology. Topics include early 
examples of folklore on film, changing conceptions of 
folklore and uses of films about folklore, and examples 
of films by, with, and for folklorists. Concurrently sched-
uled with course C183. S/U or letter grading.

375. Teaching Apprentice Practicum. (1 to 4) Semi-
nar, to be arranged. Preparation: apprentice personnel 
emphasized in teaching assistant, associate, or fellow. 
Teaching apprenticeship under active guidance and 
revision 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) Lect-
ure, to be arranged. Directed projects in professional 
editing, bibliography, filmography, videography, confer-
ence and festival director, and other professional ac-
vities. May not be applied to M.A. degree re-
quirements. May be repeated. S/U grading.

451. Teaching Assistant Seminar. (2 Seminar, one 
hour; laboratory, three hours. Required of all World 
Arts 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 grad-
ing.

480. Seminar: Research Topics. (2 Seminar, two 
hours. Forum in which faculty, students, and visitors 
made presentations and obtained feedback on research 
being planned, in progress, or recently completed. Stu-
dents required to make one presentation each term 
they are enrolled for credit. May be repeated for maxi-
mum of 8 units. S/U grading.

495. Teacher Preparation in World Arts and 
Cultures. (2) Seminar, two hours. Directed work in prepa-
ration of course syllabi and discussion of topics rele-
ant to developing teaching skills. Fundamental princi-
pies and methodology for design course syllabi, and 
gather resources for courses. Topics include de-
velopment of teaching philosophy, evaluating/Selecting 
course content, teaching 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 
venues for writing that rebalance power differential be-
 tween art markers and commentators. Concurrently 
scheduled with course C164. S/U or letter grading.

596A. Directed Individual Study or Research. (2 to 
8) Tutorial, to be arranged. S/U or letter grading.

596R. Directed Study or Research in Hospital or 
Clinic. (2 to 8) Tutorial, to be arranged. S/U grading.

597. Preparation for Master’s Comprehensive Ex-
amination or Ph.D. Qualifying Examination. (2 to 
8) Tutorial, to be arranged. Preparation for M.A. or 
M.F.A. comprehensive examination or Ph.D. qualifying 
examination. S/U grading.

598. Research for and Preparation of Master’s The-

tesis. (2 to 8) Tutorial, to be arranged. Preparation for 

599. Research for and Preparation of Ph.D. Disser-
tation. (2 to 12) Tutorial, to be arranged. Preparation of 
research data and writing of Ph.D. dissertation. May 
be repeated for credit. S/U grading.

Writing Programs / 633

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Esha N. De, Ph.D. 
Randall J. Fallow, Ph.D. 
Ed P. Frankel, M.A. 
Rachel I. Fretz, Ph.D. 
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Cheryl F. Giuliano, Ph.D. 
Susan M. Griffin, Ph.D. 
Leigh C. Harris, Ph.D. 
Christine Holten, M.A. 
Janette Lewis, Ph.D. 
Bonnie J. Lisle, Ph.D. 
Karl F. Lisovsky, M.A. 
Sonia Maasik, M.A. 
Sandra Mano, Ph.D. 
Lauri M. Mattenson, M.A. 
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Robert D. Samuels, Ph.D. 
Gina V. Shaffer, Ph.D. 
Steve K. Steinberg, Ed.D. 
Jennifer Westbay, Ph.D.

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. Be-
sides courses that satisfy the University of Cali-
fornia Entry-Level Writing requirement and 
UCLA’s English as a Second Language, Writing 
I, and Writing II requirements, Writing Pro-
grams offers language support for international 
teaching assistants, as well as advanced
courses in writing across the curriculum and composition pedagogy.

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 2I (determined by performance on the Analytical Writing Placement Examination). For more information regarding Entry-Level Writing, see Undergraduate Degree Requirements in the Undergraduate Study section of this catalog.

English as a Second Language
Lower Division Courses

32. Conversation and Interaction for Academic Purposes. (4) Lecture, four hours. Development of oral skills that prepare nonnative speakers of English to improve critical listening skills, participate in class discussions, make oral presentations before audiences, ask and answer questions, participate in English conversations with members of academic community, and improve through self-evaluation of speech. P/NP (undergraduates), SU (graduates), or letter grading.

33A. Intermediate English for Academic Purposes. (4) Lecture, 10 hours. Requisite: course 33B (C or better) or proficiency demonstrated on English as a Second Language Placement Examination. Emphasis on reading comprehension, vocabulary development, and composition techniques, with additional work on structure and oral skills. To satisfy English as a Second Language requirement, students must select letter grading. P/NP (undergraduates), SU (graduates), or letter grading.

33B. Intermediate English for Academic Purposes. (4) Lecture, five hours. Requisite: course 33A (C or better) or proficiency demonstrated on English as a Second Language Placement Examination. Emphasis on reading comprehension, vocabulary development, and composition techniques, with additional work on structure and oral skills. To satisfy English as a Second Language requirement, students must select letter grading. P/NP (undergraduates), SU (graduates), or letter grading.

33C. Advanced English for Academic Purposes. (4) Lecture, five hours. Requisite: course 33B (C or better) or proficiency demonstrated on English as a Second Language Placement Examination. Emphasis on academic reading, writing, study skills, and lecture comprehension. To satisfy English as a Second Language requirement, students must select letter grading. P/NP (undergraduates), SU (graduates), or letter grading.

33G. Advanced English for Academic Purposes for Graduate Students. (4) Lecture, five hours. Requisite: course 33B (C or better) or proficiency demonstrated on English as a Second Language Placement Examination. Designed to improve academic skills of advanced ESL graduate students, using authentic graduate-level materials. Emphasis on academic reading, writing, study skills, and lecture comprehension. To satisfy English as a Second Language requirement, students must select letter grading. P/NP (undergraduates), SU (graduates), or letter grading.

34. Public Speaking for Academic Purposes. (4) Lecture, four hours. Requisite: course 33B or proficiency demonstrated on English as a Second Language Placement Examination. Designed to help nonnative speakers of English communicate effectively in academic and professional settings. Development of oral skills that prepare nonnative speakers of English to present ideas extemporaneously, lead class discussions and making presentations. Grammar incorporated as needed, especially in regard to writing. SU or letter grading.

35. Approaches to University Writing for ESL Students. (5) Lecture, four hours. Requisite: course 33C (C or better) or proficiency demonstrated on English as a Second Language Placement Examination and/or Analytical Writing Placement Examination. Composition skills for ESL students, with focus on writing pro...
97A. Variable Topics in English as a Second Language. (4) Lecture, four hours, Specialized topics in English as a Second Language 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. Offered in summer only. P/NP (undergraduates), S/U (graduates), or letter grading.

97B. Variable Topics in English as a Second Language. (2) Lecture, two hours. Enforced requisite: course 33B or proficiency demonstrated on English as a Second Language Placement Examination. Specialized topics in English as second language 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. Offered in summer only. P/NP (undergraduates), S/U (graduates), or letter grading.

Upper Division Courses

101. Introduction to Language Learning and Language Teaching. (4) Lecture, four hours. Enforced corequisite: Applied Linguistics 101. Designed to provide students whose first language is not English with language support in areas of academic reading, writing, listening, and speaking. Exploration of skills and conditions involved in successful second and foreign language learning; application of this knowledge in development of framework for teaching second and foreign languages. P/NP or letter grading.

106. Advanced Composition for ESL Students. (4) Lecture, four hours. Requisites: course 36 (C or better) or proficiency demonstrated on English as a Second Language Placement Examination, and appropriate Composition Placement Test score. Focus on production of fully developed, stylistically sophisticated expository and argumentative essays based on complex academic reading. Additional emphasis on grammatical structure and style. P/NP (undergraduates), S/U (graduates), or letter grading.

107. Academic Reading and Vocabulary. (4) Lecture, review hours. Requisite: course 33C or 35 (may be taken concurrently) or proficiency demonstrated on English as a Second Language Placement Examination. Instruction in and practice of academic reading skills using authentic university texts. Focus on improving reading rate and comprehension, expanding academic vocabulary, and developing critical reading skills. P/NP (undergraduates), S/U (graduates), or letter grading.

108. Language and Literature. (4) Lecture, four hours. Requisite: course 33C or 35 (may be taken concurrently) or proficiency demonstrated on English as a Second Language Placement Examination. Emphasis on literary works within cultural contexts to engage students in critical thinking and writing about issues important to academic inquiry and responsible citizenship. Minimum of 15 to 20 pages of revised text required. Satisfies Writing II requirement. Letter grading.

109. Literature, Culture, and Critical Inquiry. (5) Lecture, four hours. Enforced requisite: course 3 or 3H or English as a Second Language 36. Use of analysis of literary works within cultural context to engage students in critical thinking and writing about issues important to academic inquiry and responsible citizen- ship. Minimum of 15 to 20 pages of revised text required. Satisfies Writing II requirement. Letter grading.

110. Writing Adjunct. (4) Lecture, four hours. Requisites: satisfaction of Entry-Level Writing requirement, course 3 or 3H. Designed to help students develop skills in revision, editing, and critique of university-level writing. Closely interwoven in course offered in conjunction with course 110 (consult Schedule of Classes for courses so designated). Writing assignments use materials from adjunct Writing Programs courses that have information/research-related assignments. P/NP or letter grading.

120A. Language Study for Teachers: Elementary Secondary School. (4) Lecture, four hours. Requisite: satisfaction of Entry-Level Writing and English Composition requirements. Survey of topics in English linguistics of special interest to elementary school teachers. Subjects include approaches to English grammar, language acquisition and development; language attitudes; regional and social dialects of American English; bilingual schooling; contribution of English language study to teaching of writing, spelling, and literature. P/NP or letter grading.


123. Information Literacy and Research Skills. (1) Lecture, one hour. Preparation: satisfaction of Writing I requirement. Designed to help students become information literate, so they know how to identify, locate, critically evaluate, and use print and electronic information effectively and ethically. Closely interwoven in course offered in conjunction with Writing Programs courses that have information/research-related assignments. P/NP or letter grading.

129A-129D. Academic Writing in Disciplines. (5 each) Lecture, four hours. Enforced requisite: course 2. Letter grading. Each course designed for specific disciplines. Each course and reflect and develop analytic writing skills needed in that course. May be repeated for credit with consent of instructor. P/NP or letter grading.


Upper Division Courses

100W. Introduction to Academic Writing. (5) Lecture, four hours. Requisite: course 3 or 3H or English as a Second Language 36. Designed for sophomores/juniors/seniors. Course in academic writing suitable for both lower and upper division students that helps them develop coherent, well-developed, academic prose with range of complexity and length. Focus on conventions of academic prose and genres across disciplines. Written assignments include common forms of academic writing such as argument, research paper, and/or critical essay. Satisfies Writing II requirement. Letter grading.

115. Writing Workshop. (2) Lecture, five hours, Limited to high school juniors/seniors. First course in reading and writing university-level texts and framed written responses that employ range of rhetorical strategies from paraphrase to anal- ysis. Emphasis on revision, developing syntactic variety and academic vocabulary, and editing for grammar and style. Course of course with grade of C or better or demonstration of minimum competence on Analytical Writing Placement Examination is requisite to course 2. Letter grading.

2. Approaches to University Writing. (5) Lecture, four hours. Enforced requisite: course 2 or better or appropriate score on Analytical Writing Placement Examination. Second course in university-level discourse, with analysis and critique of university-level texts. Emphasis on revision for argumentation, coherence and effective style. Completion of course with grade of C or better satisfies Entry-Level Writing requirement. Letter grading.

2. Approaches to University Writing. (5) Lecture, six hours. Enforced requisite: appropriate scores on Analytical Writing Placement Examination and English as a Second Language Placement Examination. Second course in university-level discourse, with analysis and critique of university-level texts. Emphasis on strategies for developing coherent and well-argued pieces of academic writing and for achieving effective and clear style in academic prose. Completion of course with grade of C or better satisfies Entry-Level Writing and English as a Second Language requirements. Let- ter grading.

3. English Composition, Rhetoric, and Language. (5) Lecture, three hours. Enforced requisite: satisfac- tion of Entry-Level Writing requirement, course 2 or English as a Second Language 35 (C or better). Rhetorical and argumentative skills and transport of argumentative writing, analysis of varied of academic prose and writing of minimum of 20 pages of revised text. Completion of course with grade of C or better satisfies Writing I requirement. Letter grading.

3H. English Composition, Rhetoric, and Language (Honors). (5) Lecture, three hours. Enforced requi- sites: satisfaction of Entry-Level Writing requirement, course 2 or English as a Second Language 35 (C or better). Theoretical and historical approaches to skillful argument. Analysis of varieties of academic prose and writing of minimum of 20 pages of revised text. Completion of course with grade of C or better satisfies Writing I requirement. Letter grading.

5W. Literature, Culture, and Critical Inquiry. (5) Lecture, four hours. Enforced requisite: course 3 or 3H or English as a Second Language 36. Use of analysis of literary works within cultural context to engage students analyze authentic language as it is used in private and public contexts. Minimum of 15 to 20 pages of revised text required. Satisfies Writing II requirement. Letter grading.

6. Language, Culture, and Discipline. (5) Lecture, four hours. Enforced requisite: course 3 or 3H or English as a Second Language 36. Emphasis on rhetorical and literary structures, and use of English and how it reflects social structure and cultural values. Readings in linguistic analysis, lan- guage acquisition, sociolinguistics, and pragmatics provide foundation as students analyze authentic languages as it is used in private and public contexts. Minimum of 15 to 20 pages of revised text required. Satisfies Writing II requirement. Letter grading.


50. Writing Workshop. (2) Lecture, five hours, Limited to high school juniors/seniors. Introduction to demands of university-level writing and often untested conventions that govern it. Writing techniques developed to address specific writing tasks such as timed examination, applic- ation essay, effective e-mail, and college papers. Of- fered in summer only. P/NP or letter grading.

English Composition

Lower Division Courses

A. Introduction to University Discourse. (No cred- it) Lecture, five hours. Enforced requisite: appropriate score on Analytical Writing Placement Examination. Displaces 4 units on student’s Study List but yields no credit toward A. First course in reading university-level texts and framed written responses that employ range of rhetorical strategies from paraphrase to anal- ysis. Emphasis on revision, developing syntactic vari- ety and academic vocabulary, and editing for grammar and style. Course of course with grade of C or better or demonstration of minimum competence on Analytical Writing Placement Examination is requisite to course 2. Letter grading.

B. Academic Reading and Vocabulary. (4) Lecture, four hours, Specialized topics 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. Offered in summer only. P/NP (undergraduates), S/U (graduates), or letter grading.
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 requisites must 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, three hours. Preparation: one course from 131 series. Requisites: satisfaction of Entry-Level Writing requirement, course 3. Sequence in practical writing and editing ability specifically designed to prepare students for careers. Analysis of prose and literary styles necessary to variety of writing in professional, nonacademic fields combined whenever possible with practical experience in variety of writing internships and training in wide range of editorial skills. In Progress (136A) and P/NP or letter (136B, 136C) grading.

195. Community or Corporate Internships in English Composition. (4) Tutorial, to be arranged. Requisites: course 3 or 3H, satisfaction of Writing II requirement. 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 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. Requisite: satisfaction of Entry-Level Writing and English Composition requirements. Focus of theories of rhetoric, composition, reading, and literature as they apply to secondary school or college English curriculum. S/U or letter grading.

495A. Supervised Teaching Preparation. (2) Seminar, two hours. Requisite: course 495B. Required of all teaching assistants for Writing II 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 disciplinary contexts. Practical concerns of creating assignments, marking and grading essays, and conducting peer reviews and conferences. S/U grading.

495B. Supervised Teaching Preparation. (2) Seminar, two hours. Course 495A is not requisite to 495B. 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. S/U grading.

495C. Supervised Teaching Preparation. (2) Seminar, two hours. Requisite: course 495B. Required of all teaching assistants who are assigned to English Composition 3 courses. Focus on composition pedagogy, writing course design, assessment of student writing, and specialized problems that may occur in teaching English Composition 3. S/U grading.

495D. Supervised Teaching Preparation. (2) Seminar, two hours. Requisite: course 495A. Required of all teaching assistants for Writing II 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 disciplinary contexts. Practical concerns of creating assignments, marking and grading essays, and conducting peer reviews and conferences. S/U grading.

495E. Supervised Teaching Preparation. (2) Same as Engineering M495E.) Seminar, two hours. Requisite: course 495A. 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 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.

495F. Supervised Teaching Preparation. (2) (Same as Engineering M495F.) Seminar, one hour. Requisite: course M495E. 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.
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 pregnancy, 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.

Inquiries regarding the University’s student-related nondiscrimination policies may be directed to the UCLA Campus Counsel, 3149 Murphy Hall, Box 951405, Los Angeles, CA 90095-1405, (310) 825-4042.

Inquiries regarding nondiscrimination on the basis of disability covered by the Americans with Disabilities Act (ADA) of 1990 or Section 504 of the Rehabilitation Act of 1973 may be directed to Monroe Gorden, ADA and 504 Compliance, A233 Murphy Hall, UCLA, Box 951405, Los Angeles, CA 90095-1405, (310) 825-1514, (TTY) (310) 206-3349. See http://www.ada.ucla.edu.

Students may complain of any action which they believe discriminates against them on the ground of race, color, national origin, marital status, sex, sexual orientation, disability, or age and may contact the Office of the Dean of Students, 1206 Murphy Hall, or refer to Section 111.00 of the University of California Policies Applying to Campus Activities, Organizations, and Students (available in 1206 Murphy Hall or at http://www.ucop.edu/uucophage/coordrev/ucpolicies/aos/tooc.html) for further information and procedures.

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 of UCLA’s policies and regulations parallel federal, state, and local laws, UCLA’s 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. The complete University of California Policies Applying to Campus Activities, Organizations, and Students is available at http://www.ucop.edu/uucophage/coordrev/ucpolicies/aos/tooc.html. Students may contact the Office of the Dean of Students, 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. Although the University will not routinely invoke its disciplinary processes over student conduct that occurs off campus except in connection with an official University function, the University has discretion to exercise jurisdiction over conduct that occurs off campus and that would violate student conduct and discipline policies or regulations if the conduct had occurred on campus 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, or misuse of any University document, record, key, electronic device, or identification.

Specifically, the University may choose to exercise jurisdiction over off-campus incidents under alternative A.1 above where the alleged misconduct involves

a. Conduct that threatens the health or safety of any person, including oneself. This conduct includes, but is not limited to, physical assault, sexual assault, sexual misconduct, domestic 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
b. Stalking (as defined in Section 102.10 of the University of California Policies Applying to Campus Activities, Organizations, and Students)

C. Sexual Harassment

102.01: Academic Dishonesty. All forms of academic misconduct, including but not limited to cheating, fabrication, 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 an academic exercise; the alteration of any answers on a graded document before submitting it for grading; 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.

102.01c: Plagiarism. Plagiarism includes, but is not limited to, the use of another’s words or ideas as if they were one’s own, including but not limited to representing, either with the intent to deceive or by the omission of the true source, part of or an entire work produced by someone other than the student, obtained by purchase or otherwise, as the student’s original work or representing the identifiable but altered ideas, data, or writing of another person as if those ideas, data, or writing were the student’s original work.
102.01d: Multiple Submissions. Multiple submissions includes, but is not limited to, the re-submission by a student of any work which has been previously submitted for credit in identical or similar form in one course to fulfill the requirements of a second course, without the informed permission/consent of the instructor of the 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 instructors 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 misconduct (e.g., cheating, fabrication, plagiarism, multiple submissions).

102.01f: Coercion Regarding Grading or submissions). A student commit an act of academic misconduct is defined as behavior that the student is caused or coerced to commit an act of misconduct (e.g., physical, psychological, or financial). Coercion includes, but is not limited to, threatening or intimidating the student or the student's family, or offering or threatening to offer rewards or benefits. Coercion also includes, but is not limited to, physical or psychological pressure to commit an act of misconduct or to influence the student's academic performance.

102.02: Other Forms of Dishonesty. Other forms of dishonesty include, but are not limited to, fabrication of information, 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.

102.04: Theft. Theft of, conversion of, misappropriation of, or damage to or destruction of any property of the University or property of others while on University premises or at official University functions; or possession of any property when the student had knowledge or reasonable cause to have had knowledge that it was stolen.

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. Uses include, but are not limited to, unauthorized entry, use, transfer, or tampering with the communications of others; interference with the work of others and with the operation of computer or electronic communications facilities, systems, and services. Abuses include, but are not limited to, unauthorized entry, use, transfer, or tampering with the communications of others; 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 UCLA E-Mail Policy and Guidelines (available at http://www.admnpolicies.ucla.edu/app/Default.aspx?&id=455), of the University of California Electronic Communications Policy (available at www.ucop.edu/ucophome/policies/ec/), 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: Unauthorized Use of University Housing and Parking.

102.07a: University Housing. Violation of policies, regulations, or rules governing University-owned, -operated, or -leased housing facilities or other housing facilities located on University property.

102.07b: Parking. Violation of policies, regulations, or rules governing University parking services or University-owned or -operated parking facilities.

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 assault, sexual misconduct, domestic 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.

Sexual Assault occurs when a person knowingly causes another person to engage in a sexual act by (a) physical force, violence, threat, intimidation, and/or coercion; (b) ignoring the objections of the other person; (c) causing the other's intoxication or impairment through the use of drugs or alcohol; or (d) taking advantage of the other person's incapacitation, state of intoxication, helplessness, or other inability to consent. Situations involving physical force, violence, threat, intimidation, and/or coercion fall under the definition of Sexual Assault.

Sexual Misconduct occurs when a person, having failed to take appropriate steps to gain effective consent, engages in a sexual act with another under the unreasonable belief that effective consent had been obtained. NOTE: For the purpose of this regulation, the following apply:

1. "Effective consent" referenced in the terms above means words or actions that show a voluntary agreement to engage in a mutually agreed-upon sexual activity.

2. "Sexual act" referenced in the terms above includes, but is not limited to, sexual intercourse, sodomy, oral-genital contact, or sexual penetration with a foreign object (including a finger), the touching of a person's intimate parts (defined as genitalia, groin, breast, or buttocks, or clothing covering them), or compelling a person to touch her or his own or another person's intimate parts without effective consent.

3. Intoxication of the accused will not diminish her or his responsibility for any violations of this section.

102.09: [Interim]. Sexual, racial, and other forms of harassment, defined as follows:

Harassment is defined as conduct that is so severe and/or pervasive, and objectively offensive, in that it 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 on the basis of her or his race, color, national or ethnic origin, alien niche, sex, religion, age, sexual orientation, gender identity, marital status, veteran status, physical or mental disability, or perceived membership in any of these classifications.

Student Employees. When employed by the University of California, and acting within the course and scope of that employment, students are subject to the University of California Policy on Sexual Harassment. Otherwise, Section 102.09 above is the applicable standard for harassment by students.

For both student and/or employee sexual harassment, refer to the University of California Procedures for Responding to Reports of Sexual Harassment.

102.10: Stalking. Stalking 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 her or his safety, or the safety of her or his 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.

102.11: [Deleted—See 102.09].

102.12: Hazing. Participation in 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 assembly.

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 University or other public officials in the performance of or the attempt to perform their duties.

102.17: Controlled Substances. Unlawful manufacture, distribution, dispensing, possession, use, or sale of, or the attempted manufacture, distribution, dispensing, or sale of controlled substances, identified in Federal and State laws or regulations, or being unable to
exercise care for one’s own safety or the safety of others 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 or the safety of others 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. Except as expressly permitted by law, possession, use, storage, or manufacture of a firearm or other weapon capable of causing bodily injury. Except as expressly permitted by University policy, possession, use, storage, or manufacture of replicas of firearms or other weapons.  

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 Course Notes. Selling, preparing, or distributing for any commercial purpose course lecture notes or 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 course notes or 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: University Properties. Organizing or carrying out unlawful activity on University properties.  

102.25: Violations of Law. Violation of Federal, State, or local laws.  

Sexual Assault and Sexual Misconduct  
UCLA does not tolerate sexual assault or sexual misconduct. Where there is probable cause to believe a student has committed a sexual assault or has engaged in sexual misconduct, disciplinary action will be pursued. Sanctions may include dismissal from the University.  

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 Santa Monica UCLA Medical Center Emergency Room for emergency medical treatment and evidence collection. A counselor from the Rape Treatment Center will be available at that time, free of charge  
Utilize campus and community support services:  
1. Contact a Campus Assault Resources and Education (CARE) counselor at Counseling and Psychological Services. CARE counselors have expertise in working with people who have been sexually assaulted. 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 through the Office of the Dean of Students. Counselors are available to assist any UCLA student regardless of where or when the assault occurred. For assistance, contact Counseling and Psychological Services at (310) 825-0768 or go to 221 Wooden Center West and ask to speak to a CARE counselor.  
2. Contact the Rape Treatment Center at Santa Monica UCLA Medical Center (310-319-4000) for free emergency medical treatment and counseling services. See http://www.911rape.org. Caring assistance is available for persons who have been subjected to sexual assault or sexual misconduct. They are encouraged in the strongest terms to make a report.  

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 University 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 this policy. See http://www.sexualharassment .ucla.edu.  
Definitions  
For detailed definitions of sexual harassment, refer to Section 102.09 of the UCLA Student Conduct Code listed above.  

Complaint Resolution  
Experience has demonstrated that many complaints of sexual harassment can be effectively resolved through informal intervention. Individuals who experience what they consider to be sexual harassment are advised to confront the alleged offender immediately and firmly. Additionally, an individual who believes that she or he has been sexually harassed may contact the Sexual Harassment Coordinator in 2241 Murphy Hall or a Sexual Harassment Information Center counselor for help and information regarding sexual harassment complaint resolution or grievance procedures at one of the locations listed below as determined by the complainant’s status at the University at the time of the alleged incident:  
1. Campus Human Resources/Employee and Labor Relations, Manager, 200 UCLA Wilshire Center, (310) 794-0860  
2. Campus Human Resources/Staff and Faculty Counseling Center, Coordinator, 380 UCLA Wilshire Center, (310) 794-0248
3. Center for Student Programming, Associate Director, 105 Kerckhoff Hall, (310) 206-8817
4. Chancellor's Office, Sexual Harassment Coordinator, 2241 Murphy Hall, (310) 206-3417
5. Counseling and Psychological Services, Director, 221 Wooden Center West, (310) 825-0768
6. David Geffen School of Medicine, Dean's Office, Special Projects Director, 12-138 Center for the Health Sciences, (310) 794-1958
7. Graduate Division, Office Manager, 1237 Murphy Hall, (310) 206-3269
8. Healthcare Human Resources, Employee Relations Manager, 400 UCLA Wilshire Center, (310) 794-0500
9. Lesbian Gay Bisexual Transgender Campus Resource Center, Director, B36 Student Activities Center, (310) 206-3628
10. Office of the Dean of Students, Assistant Dean of Students, 1206 Murphy Hall, (310) 825-3871
11. Office of Ombuds Services, 105 Strathmore Building, (310) 825-7627; 52-025 Center for the Health Sciences, (310) 206-2427
12. Office of Residential Life, Judicial Affairs Coordinator, 205 Bradley Hall, (310) 825-3401
13. Resnick Neuropsychiatric Hospital, Administration/Human Resources Associate Director, B7-370 Semel Institute, (310) 206-5258
14. School of Dentistry, Assistant Dean, Student Affairs, A0-111 Dentistry, (310) 825-2615
15. Student Legal Services, Director, A239 Murphy Hall, (310) 825-9894
16. UCLA Extension, Human Resources Director, 629 UNEX Building, (310) 825-4287; Student Services Director, 214 UNEX Building, (310) 825-2656

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; http://www.ucop.edu/ucophome/coordrev/ucpolicies/aos/toc.html) 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 Section 102.06 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 an offending student to University discipline under the provisions of Section 102.04 of the Policies.

Further, under specific circumstances described in the Universitywide Student Conduct Harassment Policy (http://www.deansofstudents.ucla.edu), students may be subject to University discipline for misconduct which may consist solely of expression. Copies of this Policy are available in the Office of the Dean of Students, 1206 Murphy Hall, or in any of the Harassment Information Centers listed below:

1. Counseling and Psychological Services, 221 Wooden Center West, (310) 825-0768, http://www.counseling.ucla.edu
2. Dashew Center for International Students and Scholars, 106 Bradley Hall, (310) 825-1681, http://www.internationalcenter.ucla.edu

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 any of the Harassment Information Centers listed immediately above.

In addition to providing support for those who believe they have been victims of harassment, Harassment Information Centers offer persons the opportunity to learn about the phenomena of harassment and intimidation; to understand the formal and informal mechanisms by which misunderstandings may be corrected and, when appropriate, student perpetrators may be disciplined; and 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 can be found in the UCLA Faculty Handbook (copies are available in the Academic Personnel Office, 3109 Murphy Hall, and at http://www.apo.ucla.edu/facultyhandbook/9.htm). 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, ethnic origin, national origin, ancestry, marital status, medical condition, 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 charge 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 last 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.

Laws Governing Residence

The rules regarding residence for tuition purposes at the University of California are governed by the California Education Code and implemented by Standing Order 110.2 of The Regents of the University of California (http://www.universityofcalifornia.edu/regents/bylaws/s01102.html). Under these rules adult citizens and certain classes of aliens can establish residence for tuition purposes. There are particular rules that apply to the residence classification of minors (see below).

Who Is a Resident?

Persons who are adult students (at least 18 years of age) may establish residence for tuition purposes in California if (1) they are U.S. citizens, (2) they are permanent residents or other immigrants, or (3) they are nonimmigrants who are not precluded from establishing a domicile in the U.S.

Nonimmigrants who are not precluded from establishing domicile in the U.S. include those who hold valid visas of the following types: A, E, G, H-1, H-4, I, K, L, O-1, O-3, R, T, U, or V. To establish residence students must be physically present in California for more than one year, and they must have come here with the intent to make California their home as opposed to coming to this state to go to school. Physical presence within the state solely for educational purposes does not constitute the establishment of California residence, regardless of the length of stay. Students must demonstrate their intention to make California their home by severing their residential ties with their former state of residence and establishing those ties with California. If these steps are delayed, the one-year durability period is extended until students have demonstrated both presence and intent for one full year. If their parents are not California residents, students are required to be financially independent in order to be a resident for tuition purposes. Their residence cannot be derived from their spouse, registered domestic partner, or their parents.

Requirements for Financial Independence

Students are considered financially independent if one or more of the following apply: (1) they are at least 24 years of age by December 31 of the calendar year for which they are requesting residence classification; (2) they are a veteran of the U.S. Armed Forces; (3) they are a ward of the court or both parents are deceased; (4) they have legal dependents other than a spouse; (5) they are married, have a registered domestic partner, or are a graduate student or a professional student, and they were not claimed as an income tax deduction by their parents or any other individual for the tax year immediately preceding the term for which they are requesting resident classification; or (6) they are a single undergraduate student and they were not claimed as an income tax deduction by their parents or any other individual for the tax year immediately preceding the term for which they are requesting resident classification; or (6) they are a single undergraduate student and they were not claimed as an income tax deduction by their parents or any other individual for the tax year immediately preceding the term for which they are requesting resident classification; and (7) they are a single undergraduate student and they were not claimed as an income tax deduction by their parents or any other individual for the tax year immediately preceding the term for which they are requesting resident classification.

Note: Financial dependence is not a factor in determining residence status for graduate student instructors, graduate student teaching assistants, research assistants, junior specialists, postgraduate researchers, graduate student researchers, and teaching associates who are employed 49 percent or more of full time or awarded the equivalent in University-administered funds (e.g., grants, stipends, fellowships) in the term for which classification is sought.

Establishing Intent to Become a California Resident

Indications of students’ intent to make California their permanent residence can 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 if they are in the military service, (3) obtaining a California driver’s license or, if they do 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 residency 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 residence 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 on or 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

Minor students 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 majority 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 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, 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 Military

Members of the U.S. military 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 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. military 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. military 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.

Suppose, 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. military 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 military 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 military 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. military 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. military 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. military 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 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 the minimum time necessary to become a resident.

Graduate of a California High School

Students who attended high school in California for three or more years (9th grade included) and graduated from a California high school (or attained the equivalent) may be exempt from nonresident supplemental tuition. They are not eligible for the exemption if they are a nonimmigrant alien.

Surviving Dependents of California Residents Killed in the September 11, 2001, Terrorist Attacks

Students who are surviving dependents of California residents killed in the September 11, 2001, terrorist attacks may be exempt from nonresident supplemental tuition.
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Petition for Residence Classification

Students may obtain a petition at 1113 Murphy Hall or at http://www.registrar.ucla.edu/forms/residencieclass.pdf 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 Office of the Registrar, 1113 Murphy Hall, Box 951429, Los Angeles, CA 90095-1429 (310-825-3447; http://www.registrar.ucla.edu/faq/residencefaq.htm)

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 for classify the student as a nonresident 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 student be reclassified as a resident.

2. Significant new information became available after the date of the campus decision classifying the student as a nonresident; despite the exercise of reasonable diligence (care and attention) the information was not previously known or available to the student; and, based on the new information classification as a nonresident is incorrect.

No appeals based solely on disagreement with the campus decision are acceptable.

Financial Aid Standards for Satisfactory Academic Progress

The UCLA Financial Aid Office establishes Standards of 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 Guide to Satisfactory Academic Progress at http://www.fao.ucla.edu/publications.html.

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 may not exceed 150 percent of the published length of students’ programs.

Change of Major/Pursuit of Double Major/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, Remedial, and Summer Sessions Coursework
English as a Second Language (ESL), remedial, and Summer Sessions coursework counts as units attempted and 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.

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 Spring 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. Suspended students are notified via MyFAO 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 adviser to explore ways to eliminate deficiencies and to 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 the Financial Aid Office 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 the Financial Aid Office 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 examination or other work submitted by a student, the student is suspected of having engaged in plagiarism or otherwise having cheated, 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 reexamination or, with the exception of the I and IP grades, the completion of additional work. Any grade change request made more than one year after the original filing must be validated for authenticity of the instructor's signature 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 event that administering the test or examination at an alternate time would impose an undue hardship that could not reasonably be avoided. Accommodation for alternate examination dates are 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 Strausmore Building, or the Office of the Dean of Students, 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 or the Office of the Dean of Students 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/mail ing, 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.

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 URSRA (http://www.ursa.ucla.edu). 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.

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 URSRA (http://www.ursa.ucla.edu). 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.

Students 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 the Dean of Students, 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 UCLA Telephone Directory (http://www.directory.ucla.edu) 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 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 the Dean of Students, 1206 Murphy Hall.

Undergraduate Retention, Graduation, and Time to Degree

Retention and graduation rates are higher than ever before at UCLA and among the highest for public universities anywhere in the country.

The past three years, 97 percent of all students entering from high school and 94 percent of all students entering as transfers were still enrolled at UCLA one year later.

The past three years, the four-year, five-year, and six-year graduation rates for students entering from high school averaged 65, 87, and 89 percent respectively. Over 91 percent of all entering freshmen eventually graduate from UCLA.

The past three years, the two-year, three-year, and four-year graduation rates for entering transfer students have averaged 56, 86, and 90 percent respectively. Over 91 percent of all entering transfer students eventually graduate from UCLA.

Time to degree for UCLA undergraduates has declined significantly over the past decade. In 2009-10 approximately 4,500 baccalaureate degrees were awarded to students who entered directly from high school. The average number of quarters registered at UCLA was 12.1, down from an average of 13 quarters for similar graduates in 1999-00. Among recent graduates, 80 percent were registered for 12 quarters or less (i.e., four years or less), 87 percent for 13 quarters or less, 93 percent for 14 quarters or less, and 99 percent for 15 quarters or less (i.e., five years or less). In 2009-10 approximately 3,100 baccalaureate degrees were awarded to students who entered as transfers. The average number of quarters registered at UCLA was 6.7, down from an average of 7.5 quarters for similar graduates in 1999-00. Among recent gradu-
ates, 66 percent were registered for six quarters or less (i.e., two years or less), 76 percent for seven quarters or less, 84 percent for eight quarters or less, and 96 percent for nine quarters or less (i.e., three years or less).

Additional information is available at http://www.aim.ucla.edu/graduation/graduation.asp.

## Campus Security Information

### UCLA Police Department

The UCLA Police Department (UCPD), (310) 825-1491, http://www.ucpd.ucla.edu, 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 crime, 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 Bureau 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, Reagan UCLA Medical Center, Center for the Health Sciences, Santa Monica UCLA Medical Center and Orthopaedic Hospital, and University Apartments South. The City of Los Angeles Police Department does not 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 the campus, the Center for the Health Sciences, and other UCLA properties should be reported immediately to the 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 dialing 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.

Campus community members are encouraged to program the department number (310-825-1491) into their cell phones. When on campus this number should be used in the event of an emergency to avoid the delay that may occur by the time it takes for the emergency cellular operators to transfer calls to the appropriate jurisdiction.

NONEMERGENCY calls for service can be made by contacting the department at (310) 825-1491.

### Crime Statistics and Reports

As required by the Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistics Act, 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 at http://map.ais.ucla.edu/go/1000958.

### Community Service Officers

UCPD employs approximately 80 student community service officers (CSOs; http://map.ais.ucla.edu/go/100050) who are the additional “eyes and ears” (trained observers) of the department and act as noninterventional 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 (http://map.ais.ucla.edu/go/1000806) operates every day of the year from dusk to 1 a.m. (2 a.m. on Thursdays during academic terms). 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 (http://map.ais.ucla.edu/go/1001008) provides 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 (http://map.ais.ucla.edu/go/1001449) 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, and sexual assault prevention. 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 provide 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 meet 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. All incidents of criminal activity that pose a potential threat to the campus are brought immediately to the attention of the community through campus Crime Alert Bulletins (http://map.ais.ucla.edu/go/1001893). Additionally, those interested in receiving public safety bulletins and news briefs can sign up for the public safety list server at http://lists.ucla.edu/cgi-bin/mailman/listinfo/campus_safety-l.

### 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 behavioral problems. Therefore, UCLA makes available to every student a variety of alcohol and substance abuse awareness programs that are designed to discourage the use of illicit substances and to educate students on the merits of legal and responsible alcohol consumption. Counseling and Psychological Services (310-825-0768; http://www.counseling.ucla.edu) provides counseling and referral assistance to students who are troubled by alcohol or substance abuse problems. The service is completely confidential and free to regularly enrolled students. All information and counseling is treated in accordance with University Policies and State and Federal Laws. Any decision to seek assistance is not used in connection with any academic determination or as a basis for disciplinary proceedings.

### Policies

UCLA is designated as a drug-free environment and, only under certain conditions is alcohol consumption permitted (none is permitted at athletic events). In keeping with its educational mission, the University assumes the re-
sponsibility to better inform the UCLA community about alcohol and substance abuse. The sale, manufacture, distribution, or possession of any controlled substance without a prescription is illegal under both State and Federal Laws. Such laws are strictly enforced by UCLA police officers. Student violators are subject to University disciplinary action, criminal prosecution, fine, and imprisonment. Refer to the UCLA policies on substance abuse for further information.

The sale, consumption, and distribution of alcohol on the UCLA campus is restricted by the UCLA alcohol policy and California State Law. Organizations or groups violating alcohol or substance policies or laws may be subject to sanctions by the University.

Residential Housing
UCLA is the size of a small city and provides residential housing to approximately 11,000 students. Housing facilities range from apartments designed for students with children to multistudent apartment complexes to high-rise student residence halls. UCPD and student housing staff work hand in hand to create a safe and comfortable living and learning environment. Campuswide security and safety programs for residents are held throughout the year to increase crime potential awareness and improve campus safety. To keep residents immediately informed of major crime or threats to the campus, Crime Alert Bulletins are posted in residential areas by the housing staff. However, residents must take an active role to ensure their own safety by exercising simple commonsense crime prevention techniques. Because the campus is open 24 hours a day, visitation to residence halls and apartments is restricted. All residence halls have 24-hour access control on entrance doors, and during the evening hours access control monitors are stationed at each entrance. Police officers and CSOs are also assigned to the residence halls.

UCLA-affiliated organizations that maintain off-campus facilities are under the shared jurisdiction of their local police department and the UCLA Police Department, which provides assistance to students, faculty, and staff and/or referrals to neighboring police departments.

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 a steering wheel locking device and/or alarm. 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 should not hesitate to contact the department.

APPENDIX B: UNIVERSITY ADMINISTRATIVE OFFICERS
Terms of Regents (http://www.universityofcalifornia.edu/regents/) appointed by the Governor expire March 1 of the year in parentheses. The Student Regent (Alfredo Mireles, Jr.) 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
John A. Pérez
State Superintendent of Public Instruction
Thomas A. Torlakson
President of the Alumni Associations of the University of California
Bruce Hallelt (2012)
President of the Alumni Associations of the University of California
Lori Pellecioni (2012)
President of the University
Mark G. Yudof

Appointed Regents
Richard C. Blum (2014)
David G. Crane (2022)
William De La Peña (2018)
Russell S. Gould (2017)
Eddie Island (2017)
Odessa P. Johnson (2012)
George D. Kieffer (2021)
Sherry L. Lansing (2022)
Monica C. Lozano (2013)
Hadi Makarechian (2020)
George M. Marcus (2012)
Norman J. Pattiz (2014)
Bonnie Reiss (2020)
Frederick R. Ruiz (2016)
Leslie Tang Schilling (2013)
Bruce D. Varner (2018)
Paul D. Wachter (2016)
Charlene Zettel (2021)
Alfredo Mireles, Jr., Student Regent (2012)

Faculty Representatives to the Board of Regents
Robert M. Anderson
Robert L. Powell

Staff Advisers to the Board of Regents
Penelope Herbert (2010-12)
Kevin Smith (2011-13)

Officers of The Regents
President of The Regents
Edmund G. Brown, Jr.
Chair of The Regents
Sherry L. Lansing
Vice Chair of The Regents
Bruce D. Varner
Chief Investment Officer and Acting Treasurer
Marie N. Berggren
General Counsel
Charles F. Robinson
Secretary and Chief of Staff
To be announced
Senior Vice President—Chief Compliance and Audit Officer
Sheryl Vacca

Office of the President
President of the University
Mark G. Yudof
Provost and Executive Vice President—Academic Affairs
Lawrence H. Pitts
Executive Vice President—Business Operations
Nathan Brostrom
Executive Vice President—Chief Financial Officer
Peter J. Taylor
Senior Vice President—External Relations and Vice President—Health Sciences and Services
John D. Stobo
Vice President—Budget and Capital Resources
Patrick J. Lenz
Vice President—Human Resources
Dwaine B. Buckett
Vice President—Investments
Marie N. Berggren
Vice President—Laboratory Management
Bruce B. Darling
Vice President—Legal Affairs
Charles F. Robinson
Vice President—Research and Graduate Studies
Steven V.W. Beckwith
Vice President—Student Affairs
Judy K. Sakaki

Chancellors of the Campuses
Chancellor at Berkeley
Robert J. Birgeneau
Chancellor at Davis
Linda P.B. Katehi
Chancellor at Irvine
Michael V. Drake
Chancellor at Los Angeles
Gene D. Block
Chancellor at Merced
Dorothy Leland
Chancellor at Riverside
Timothy P. White
Chancellor at San Diego
Marye Anne Fox
Chancellor at San Francisco
Susan Desmond-Hellmann
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 teaching, research, and community service. Among the principal forms of private support are endowed professorships or “chairs,” that support the educational and research activities of distinguished members of the faculty.

As this catalog goes to press, UCLA has 352 endowed chairs that have been approved by the Office of the President of the University of California.

See the complete list of endowed chairs at http://www.registrar.ucla.edu/catalog/UCLA EndowedChairs1112.pdf.

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.

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. Hage (Germanic Languages)
Wendell P. Jones (Education)
Robert H. Sorgenfrey (Mathematics)
Saul Weinstein (Chemistry and Biochemistry)

1964
Mustafa 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 Parmucci (Psychology)
William R. Romig (Microbiology and Molecular Genetics)

1966
George A. Bartholomew (Biology)
William P. 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. Hobbs (Political Science)
J.E. Phillips (English)
Raymond M. Redheffer (Mathematics)
Margaret I. Sellers (Microbiology and Immunology)

1970
Ehrhard Bahr (Germanic Languages)
Joseph Cascarano (Biology)
B. Lamar Johnson (Education)
Daniel Kivelson (Chemistry and Biochemistry)
Richard D. Lehan (English)

1971
Vernon E. Denny (Chemical Engineering)
Peter N. Ladevede (Linguistics)
Arthur D. Schwabe (Medicine)
Duane E. Smith (Political Science)
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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. Kurkin (Linguistics)
Robert C. Neurhout (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)
Jesse J. Dukeminier (Law)
George R. Guffey (English)
Marilyn L. Kourilsky (Education)
Chand R. Viswanathan (Electrical Engineering)

1977
Michael J.B. Allen (English)
Henry M. Cherrick (Dentistry)
Richard C. Maxwell (Law)
J. William Schopf (Earth and Space Sciences)
Verne N. Schumaker (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. Braunmuller (English)
Fredi Chiappelli (Italian)
Kenneth A. Korst (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. Liggitt (Architecture and Urban Design, Urban Planning)
William Melnitz (Theater)
Joseph K. Perloff (Medicine)
Karen E. Rowe (English)

1983
Claude Bernard (Physics and Astronomy)
Bryan C. Ellickson (Economics)
Robert S. Elliott (Electrical Engineering)
Albert D. Hutter (English)
Charles M. Knobler (Chemistry and Biochemistry)

1984
Robert Dallek (History)
Hooshang Kangerloo (Radiological Sciences)
Jeffrey Prager (Sociology)
Stanley Siegel (Law)
Sandra A. Thompson (Linguistics)

1985
Patricia M. Greenfield (Psychology)
David F. Martin (Computer Science)
Mark W. Plant (Economics)
Ross P. Shideler (Scandinavian Section, Comparative Literature)
William D. Warren (Law)

1986
Roger A. Gorski (Neurobiology)
Patricia A. Keating (Linguistics)
Leonard Kleinrock (Computer Science)
Martin Wachs (Urban Planning)
Scott L. Waugh (History)

1987
Lawrence W. Bassett (Radiological Sciences)
E. Bradford Burns (History)
Kenneth W. Graham, Jr. (Law)
Howard Suber (Film and Television)
Richard A. Yarborough (English)

1988
Alison G. Anderson (Law)
Ann L.T. Bergen ( Classics)
Charles A. Berst (English)
Michael J. Goldstein (Psychology)
Richard L. Sklar (Political Science)

1989
John B. Garnett (Mathematics)
Kathleen L. Komar (Comparative Literature, Germanic Languages)
William G. Roy (Sociology)
Stephen Yenster (English)
Eric M. Zoll (Law)

1990
Peter M. Narins (Physiological Science)
Gary B. Nash (History)
John S. Wiley (Law)
Merlin C. Wittrock (Education)
Ruth Yeazell (English)

1991
Michael R. Asimow (Law)
Edward G. Berenson (History)
Robert A. Bjork (Psychology)
Margaret FitzSimmons (Urban Planning)
Kenneth R. Lincoln (English)

1992
Bruce L. Baker (Psychology)
Paul B. Bergman (Law)
Robert B. Goldberg (Molecular, Cell, and Developmental Biology)
Peter E. Kollock (Sociology)
Eugen Weber (History)

1993
Calvin B. Bedient (English)
Richard B. Kaner (Chemistry and Biochemistry)
Katherine C. King (Classics)
William G. Ouchi (Management)
Bruce Schuman (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 Szelenyi (Sociology)

1998
George W. Bernard (Dentistry)
Verónica Cortínez (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. Colaccorico (English)
Glen M. MacDonald (Geography)
Appendix D: Distinguished Teaching Awards

Kevin Terraciano (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)
Jesus Torrecilla (Spanish and Portuguese)
Joan Waugh (History)

2005
Roger Bourland (Music)
Robert G. Fovell (Atmospheric and Oceanic Sciences)
Elma Gonzalez (Ecology and Evolutionary Biology)
Elizabeth A. Marchant (Spanish and Portuguese)
Mike Rose (Education)
Keith D. Stolzenbach (Civil and Environmental Engineering)

2006
Robert A. Gurval (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. Matsumoto (Asian American Studies, History)
Behzad Razavi (Electrical Engineering)
Daniel G. Solorzano (Education)
Blair 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-Anispe (Molecular, Cell, and Developmental Biology)
Yung-Ya Lin (Chemistry and Biochemistry)
Mark B. Moldwin (Earth and Space Sciences)
Susan J. Plann (Applied Linguistics and 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. Courcy (Chemistry and Biochemistry)
Jerry Kang (Law)
Steven F. Reise (Psychology)

2011
Ann E. Carlson (Law)
Andrew Christensen (Psychology)
Ian Krouse (Music)
Patricia E. Phelps (Integrative Biology and Physiology)
Yahya Rahmat-Samii (Electrical Engineering)
Philip W. Rundel (Ecology and Evolutionary Biology)

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 that 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 Barchy (History)
Bonnie Lisle (Writing Programs)
Kenneth R. Pfeiffer (Civil Engineering, Psychology)

1990
Lisa Gerrard (Writing Programs)
Andres Durstenfeld (Biology)
Dorothy Phillips (Physiological Science)

1991
Marde S. Gregory (Speech)
Betty A. Luceigh (Chemistry and Biochemistry)
Cheryl Pflot (Writing Programs)

1992
Janet Goodwin (Teaching English as a Second Language and Applied Linguistics)
Janette Lewis (Writing Programs)
Yihua Wang (East Asian Languages and Cultures)

1993
Stephen Dickey (English)
Sondra Hale (Anthropology)
Julia Landa (Germanic Languages)

1994
Steven K. Derian (Law)
Linda Jensen (Teaching English as a Second Language and Applied Linguistics)
Shelby Popham (Writing Programs)

1995
Nicholas Collaros (French)
Kristine S. Knaplund (Law)
Christopher Mott (English)

1996
Scott Bowman (Political Science)
Timothy Tangherlini (Scandinavian Section)
G. Jennifer Wilson (Honors and 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 (UCLA Emergency Medicine Center)

2000
Nicole Dufresne (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)
Gold Shield Faculty Prize

The $30,000 Gold Shield Faculty Prize, an award for academic excellence, was created by the Gold Shield Alumnae of UCLA in celebration of their fiftieth anniversary in 1986. The prize is funded by an endowment of $250,000 raised by Gold Shield for this purpose, which has grown to over $450,000. Guidelines provide that the prize “recognize and reward UCLA faculty members who have demonstrated extraordinary accomplishment in teaching and in research or creative activity...and who have made a significant contribution to undergraduate education.” Preference for recipients is given to faculty members in mid-career who do not often receive the extra professional incentives available to distinguished senior faculty.

The Gold Shield Faculty Prize is awarded to each recipient for scholarly use. The awardee is selected every year by a committee of peers appointed by the Academic Senate. Student and Gold Shield representatives are included. Recipients must come from fields that have undergraduate programs at UCLA.

1986-88
Michael E. Jung (Chemistry and Biochemistry)
1988-90
Patricia M. Greenfield (Psychology)
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
Utulbanerree (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)
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